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OM protein - protein search, using sw model

Run on: March 16, 2005, 12:20:02 ; Search time 101.333 Seconds
(without alignments)
103.051 Million cell updates/sec

Title: US-10-822-677-10
Perfect score: 132
Sequence: 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	132	100.0	27	1	AAP60647	Aap60647 Secretin
2	132	100.0	27	2	AAR93024	Aar93024 Human glu
3	132	100.0	27	3	AAB08187	Aab08187 Amino aci
4	132	100.0	27	4	AAB70890	Aab70890 Human sec
5	132	100.0	27	4	AAB91261	Aab91261 Secretin
6	132	100.0	27	5	AAU85988	Aau85988 Modified
7	132	100.0	27	6	ABR40225	Abr40225 Human sec
8	132	100.0	27	7	ADC87728	Adc87728 Human sec
9	132	100.0	27	8	ADN03397	Adn03397 Exemplary

10	132	100.0	27	8	ADR42232	Adr42232 Secretin
11	132	100.0	28	1	AAP91869	Aap91869 Human sec
12	132	100.0	31	1	AAP90130	Aap90130 Human sec
13	132	100.0	121	5	AAO21664	Aao21664 Human sec
14	126	95.5	27	4	AAB91259	Aab91259 Secretin
15	126	95.5	27	6	ABR40227	Abr40227 Canine se
16	123	93.2	27	1	AAP20383	Aap20383 Protected
17	123	93.2	27	1	AAP20398	Aap20398 Secretin
18	123	93.2	27	1	AAP30021	Aap30021 Synthetic
19	123	93.2	27	1	AAP30014	Aap30014 27-Desami
20	123	93.2	27	1	AAP30038	Aap30038 Pig Secre
21	123	93.2	27	2	AAW37793	Aaw37793 Porcine s
22	123	93.2	27	2	AAW71676	Aaw71676 Secretin-
23	123	93.2	27	2	AAY50236	Aay50236 Neutrophi
24	123	93.2	27	4	AAB70901	Aab70901 Porcine s
25	123	93.2	27	4	AAB91262	Aab91262 Secretin
26	123	93.2	27	4	AAB50844	Aab50844 Pig prote
27	123	93.2	27	5	AAE23673	Aae23673 Heptacosi
28	123	93.2	27	5	ABB06679	Abb06679 Mammalian
29	123	93.2	27	5	AAE23659	Aae23659 Heptacosi
30	123	93.2	27	5	ABB08014	Abb08014 Human sec
31	123	93.2	27	5	ABB04453	Abb04453 Secretin
32	123	93.2	27	5	ABB81203	Abb81203 Secretin
33	123	93.2	27	6	ABR40226	Abr40226 Porcine s
34	123	93.2	27	6	ABP56898	Abp56898 Secretin
35	123	93.2	27	7	ADD69986	Add69986 Vasoactiv
36	123	93.2	27	8	ADP74185	Adp74185 Secretin
37	123	93.2	28	1	AAP30063	Aap30063 Recombina
38	123	93.2	28	1	AAP30062	Aap30062 27-desami
39	123	93.2	33	1	AAP70421	Aap70421 Sequence
40	121	91.7	27	2	AAW37796	Aaw37796 Porcine s
41	119	90.2	27	4	AAB91263	Aab91263 Secretin
42	116	87.9	27	1	AAP30049	Aap30049 Intermedi
43	116	87.9	27	6	ABU07569	Abu07569 Human sec
44	116	87.9	30	1	AAP60646	Aap60646 Mammalian
45	115	87.1	27	1	AAP30551	Aap30551 Sequence

ALIGNMENTS

RESULT 1
AAP60647
ID AAP60647 standard; peptide; 27 AA.
XX
AC AAP60647;
XX
DT 25-MAR-2003 (revised)
DT 23-JUN-1991 (first entry)
XX
DE Secretin protein sequence.
XX
KW Secretin; hormone.
XX
OS Homo sapiens.
XX
PN WO8605494-A.

XX
PD 25-SEP-1986.
XX
PF 07-MAR-1986; 86WO-SE000099.
XX
PR 11-MAR-1985; 85SE-00001202.
XX
PA (KABI) KABIGEN AB.
PA (CARL/) CARLQUIST M.
PA (SKAN-) SKANDIGEN AB.
XX
PI Carlquist M, Jornvall H, Forssmann W, Thulin L, Johansson C;
PI Mutt V;
XX
DR WPI; 1986-264936/40.
XX
PT Human intestinal hormone secretin isolated from human duodeni - useful as
PT diagnostic to determine pancreatic and gall bladder functions and
PT therapeutically to treat gastro-intestinal disorders.
XX
PS Claim 1; Page 8; 10pp; English.
XX
CC The sequence encodes the human intestinal hormone, secretin, which
CC stimulates secretion of water and bicarbonate from the pancreas. It can
CC be used diagnostically to determine pancreatic and gall bladder
CC functions, or therapeutically to treat gastro- intestinal disorders.
CC (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ Sequence 27 AA;

Query Match 100.0%; Score 132; DB 1; Length 27;
Best Local Similarity 100.0%; Pred. No. 8.1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
```

RESULT 2
AAR93024
ID AAR93024 standard; protein; 27 AA.
XX
AC AAR93024;
XX
DT 09-AUG-1996 (first entry)
XX
DE Human glucagon degrading enzyme - selectin substrate.
XX
KW Glucagon degrading enzyme; catalyst; cleavage; selectin; human; primer;
KW vasoactive intestinal peptide; VIP; pancreatic carcimoma cell line; PCR;
KW amplification; polymerase chain reaction; probe; expression vector;
KW eukaryote; SV40 promoter; COS-7.
XX
OS Synthetic.
XX
FH Key Location/Qualifiers

FT Cleavage-site 14. .15
FT Modified-site 27
FT /note= "contains C-terminal amide group"
XX
PN JP08023972-A.
XX
PD 30-JAN-1996.
XX
PF 19-JUL-1994; 94JP-00187936.
XX
PR 19-JUL-1994; 94JP-00187936.
XX
PA (SUNR) SUNTORY LTD.
XX
DR WPI; 1996-133414/14.
XX
PT New glucagon decomposing enzyme, and DNA encoding it - for specifically
PT cleaving glucagon and vasoactive intestinal peptide, in the prevention
PT and treatment of diseases caused by excess glucagon and VIP.
XX
PS Claim 1; Page 2; 18pp; Japanese.
XX
CC A novel gene encoding a glucagon degrading enzyme (GDE; AAT11575) was
CC isolated from a human pancreatic carcinoma cell line HPC-Yo cDNA library.
CC The enzyme has a mol. wt. 83 kD, a pH optimum of 6.8 and catalyses the
CC cleavage of glucagon, vasoactive intestinal peptide and selectin
CC (AAR93022-4). The gene encoding the enzyme was isolated by screening the
CC library with an anti-GDE peptide antibody, amplifying the inserts with
CC the primers AAT18903-4 and probing the fragments with the probe AAT18905.
CC This screening resulted in the full length clone designated lambda GDE4-
CC 2. The coding region of the clone was subsequently PCR amplified by the
CC primers AAT11576-7 and inserted into the eukaryotic expression vector
CC pKDCR under control of the SV40 promoter for production of the protein in
CC COS-7 cells. The protein is useful in preventing and treating diseases
CC characterised by an excess of glucagon or vasoactive intestinal peptide
XX
SQ Sequence 27 AA;

Query Match 100.0%; Score 132; DB 2; Length 27;
Best Local Similarity 100.0%; Pred. No. 8.1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
    ||||||||||||||||||||||||||||
Db 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 3
AAB08187
ID AAB08187 standard; protein; 27 AA.
XX
AC AAB08187;
XX
DT 04-DEC-2000 (first entry)
XX
DE Amino acid sequence of rat secretin polypeptide.
XX

KW Secretin; gastrointestinal hormone; pancreatic fluid; S cell;
KW pancreatic cell growth; pancreatic beta cell; pancreatic islet;
KW insulin production; glucose metabolism; insulin resistance;
KW glucose intolerance; hyperglycemia; hyperinsulinemia; obesity;
KW hyperlipidemia; hyperproteinemia; Type II diabetes mellitus.
XX
OS Rattus sp.
XX
PN WO200047721-A2.
XX
PD 17-AUG-2000.
XX
PF 10-FEB-2000; 2000WO-US003422.
XX
PR 10-FEB-1999; 99US-0119575P.
XX
PA (ONTO-) ONTOGENY INC.
XX
PI Kagan D, Pang K;
XX
DR WPI; 2000-515058/46.
DR N-PSDB; AAA63812.
XX
PT Secretin therapeutic is used to modulate the growth state of pancreatic
PT cells to provide treatment for diabetes through modification of glucose
PT metabolism.
XX
PS Claim 8; Page 86; 90pp; English.
XX
CC The present sequence represents a rat secretin polypeptide. Secretin is a
CC gastrointestinal hormone that stimulates the secretion of bicarbonate-
CC rich pancreatic fluid. Secretin is produced by specific endocrine cells
CC (S cells) located in the mucosa of the proximal small intestine.
CC Secretion of secretin is stimulated by the presence of either acidic pH
CC or fatty acids in the duodenum. The specification describes a method for
CC modulating the growth state of pancreatic cells. The method comprises
CC contacting the cells with a secretin therapeutic or prodrug form of
CC secretin. Secretin is used to modulate the growth state of pancreatic
CC cells, in particular to promote the proliferation of pancreatic cells,
CC generate functional pancreatic beta cells from pancreatic islets or
CC cells, promote insulin production in a pancreatic islet or cell,
CC antagonize insulin inhibition of secretin response in secretin-responsive
CC cells, modify glucose metabolism in an animal to treat a disease
CC associated with altered glucose metabolism e.g. insulin resistance,
CC glucose intolerance or non-responsiveness, hyperglycemia,
CC hyperinsulinemia, obesity, hyperlipidemia, hyperproteinemia or Type II
CC diabetes mellitus (NIDD)
XX
SQ Sequence 27 AA;

Query Match 100.0%; Score 132; DB 3; Length 27;
Best Local Similarity 100.0%; Pred. No. 8.1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
```

RESULT 4
AAB70890
ID AAB70890 standard; peptide; 27 AA.
XX
AC AAB70890;
XX
DT 26-JUL-2001 (first entry)
XX
DE Human secretin peptide.
XX
KW Secretin; human; nootropic; autism; treatment; prevention.
XX
OS Homo sapiens.
XX
PN WO200132196-A1.
XX
PD 10-MAY-2001.
XX
PF 03-NOV-2000; 2000WO-EP010847.
XX
PR 05-NOV-1999; 99DE-01053339.
XX
PA (GOLD-) GOLDHAM PHARMA GMBH.
XX
PI Frank A, Jordan K, Hiebl W;
XX
DR WPI; 2001-335783/35.
XX
PT Pharmaceutical composition for selective treatment of autism, containing
PT oligopeptide fragment of secretin, e.g. His-Ser-Asp-Gly-Thr-Phe-Thr-Ser.
XX
PS Disclosure; Page 11; 21pp; German.
XX
CC This invention describes novel pharmaceutical compositions containing at
CC least one secretin peptide fragment having 4-15 (preferably 4-8) amino
CC acids (optionally in acid addition salt form) and which have nootropic
CC activity. The peptide fragments described in the invention (of any
CC origin, e.g. derived from human, porcine, chicken or simian secretin)
CC have a specific beneficial action in the treatment or prevention of
CC autism. They are free of the other activities (e.g. gastrointestinal
CC effects) of secretin itself. This sequence represents the human secretin
CC peptide used to generate the peptide fragments described in the method of
CC the invention
XX
SQ Sequence 27 AA;

  Query Match   100.0%; Score 132; DB 4; Length 27;
  Best Local Similarity 100.0%; Pred. No. 8.1e-12;
  Matches   27; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

Qy   1 HSDGTFTSELSRLREGARLQRLLQGLV 27
            ||||||||||||||||||||||||||
Db   1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 5
AAB91261
ID AAB91261 standard; peptide; 27 AA.
XX
AC AAB91261;
XX
DT 22-JUN-2001 (first entry)
XX
DE Secretin peptide SEQ ID NO:437.
XX
KW Protection; endogenous therapeutic peptide; peptidase; conjugation;
KW blood component; modification; succinimidyl; maleimido group; amino;
KW hydroxyl; thiol; hormone; growth factor; neurotransmitter.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO200069900-A2.
XX
PD 23-NOV-2000.
XX
PF 17-MAY-2000; 2000WO-US013576.
XX
PR 17-MAY-1999; 99US-0134406P.
PR 10-SEP-1999; 99US-0153406P.
PR 15-OCT-1999; 99US-0159783P.
XX
PA (CONJ-) CONJUCHEM INC.
XX
PI Bridon DP, Ezrin AM, Milner PG, Holmes DL, Thibaudeau K;
XX
DR WPI; 2001-112059/12.
XX
PT Modifying and attaching therapeutic peptides to albumin prevents
PT peptidase degradation, useful for increasing length of in vivo activity.
XX
PS Disclosure; Page 341; 733pp; English.
XX
CC The present invention describes a modified therapeutic peptide (I)
CC comprising a therapeutically active amino acid region (III) and a
CC reactive group (II) (e.g. succinimidyl and maleimido groups) attached to
CC a less therapeutically active amino acid region (IV), which covalently
CC bonds with amino/hydroxyl/thiol groups on blood components to form a
CC peptidase stabilised therapeutic peptide composed of 3-50 amino acids.
CC (I) are useful for modifying therapeutic peptides e.g. hormones, growth
CC factors and neurotransmitters, to protect them from peptidase activity in
CC vivo for the treatment of various disorders. Endogenous therapeutic
CC peptides are not suitable as drug candidates as they require frequent
CC administration due to rapid degradation by peptidases in the body.
CC Modifying and attaching therapeutic peptides to albumin prevents or
CC reduces the action of peptidases to increase length of activity (half
CC life) and specificity as bonding to large molecules decreases
CC intracellular uptake and interference with physiological processes.
CC AAB90829 to AAB92441 represent peptides which can be used in the
CC exemplification of the present invention
XX
SQ Sequence 27 AA;

```
  Query Match             100.0%;  Score 132;  DB 4;  Length 27;
  Best Local Similarity   100.0%;  Pred. No. 8.1e-12;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27


RESULT 6
AAU85988
ID   AAU85988 standard; peptide; 27 AA.
XX
AC   AAU85988;
XX
DT   21-MAY-2002  (first entry)
XX
DE   Modified human secretin peptide.
XX
KW   Increased biological potency; prolonged activity; increased half-life;
KW   glucose intolerance; insulin resistance; type II diabetes; bone disease;
KW   cancer; inflammatory disorder; obesity; developmental disorder;
KW   hyperproliferative skin disease; hormone-dependent disease; homeostasis;
KW   intestinal disease; interleukin-8 production; smooth muscle contraction;
KW   feeding; blood pressure; pancreatic secretion; mutant; mutein; human;
KW   secretin.
XX
OS   Homo sapiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   1
FT                   /note= "H-His"
FT   Modified-site   27
FT                   /note= "C-terminal amide"
XX
PN   WO200210195-A2.
XX
PD   07-FEB-2002.
XX
PF   02-AUG-2001; 2001WO-CA001119.
XX
PR   02-AUG-2000; 2000US-0222619P.
XX
PA   (THER-) THERATECHNOLOGIES INC.
XX
PI   Gravel D,  Habi A,  Abribat T;
XX
DR   WPI; 2002-206179/26.
XX
PT   Novel modified biological peptide with increased biological potency,
PT   prolonged activity, increased half-life, for treating glucose intolerance
PT   associated or not with insulin resistance pathologies, type II diabetes.
XX
PS   Claim 5; Page 62; 77pp; English.
XX
```

CC The present invention relates to modified biological peptides with
CC increased biological potency, prolonged activity and/or increased half-
CC life. The peptides of the invention are useful in the treatment of
CC glucose intolerance which may be associated with insulin resistance
CC pathologies, and in the treatment of type II diabetes. They are also
CC useful for treating bone diseases, cancer, diseases related to
CC inflammatory responses, obesity, autism, pervasive developmental
CC disorders, hyperproliferative skin diseases, hormone-dependent diseases,
CC They can be used for regulating blood glucose, enhancing mucosal
CC regeneration in patients with intestinal diseases, inhibition of
CC interleukin-8 production, stimulation of acid release, homeostasis,
CC regulation of exocrine and endocrine secretions, smooth muscle
CC contraction, feeding, blood pressure, body temperature and cell growth,
CC regulation of food intake and energy balance, and stimulation of
CC pancreatic secretion or cell growth. AAU85971-AAU86019 represent the
CC modified biological peptides of the invention
XX
SQ Sequence 27 AA;

Query Match 100.0%; Score 132; DB 5; Length 27;
Best Local Similarity 100.0%; Pred: No. 8.1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
||||||||||||||||||||||||||||
Db 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 7
ABR40225
ID ABR40225 standard; peptide; 27 AA.
XX
AC ABR40225;
XX
DT 12-JUN-2003 (first entry)
XX
DE Human secretin.
XX
KW Human; asthma; anion efflux; secretin receptor; antiasthmatic; secretin.
XX
OS Homo sapiens.
XX
PN WO2003011327-A2.
XX
PD 13-FEB-2003.
XX
PF 26-JUL-2002; 2002WO-GB003433.
XX
PR 27-JUL-2001; 2001GB-00018383.
XX
PA (PHAR-) PHARMAGENE LAB LTD.
XX
PI Davis RJ, Clark K;
XX
DR WPI; 2003-248115/24.
XX
PT Treating asthma in a patient suffering from asthma, by administering to

PT the patient an agent e.g., secretin which triggers anion efflux in
PT respiratory tissue by the activation of a secretin receptor.
XX
PS Disclosure; Fig 1; 40pp; English.
XX
CC The invention relates to a novel method for treating asthma in a patient
CC suffering from asthma, involving administering to the patient an
CC effective amount of an agent which triggers anion efflux in respiratory
CC tissue by the activation of a secretin receptor. The method of the
CC invention has antiasthmatic activity. The method is useful for treating
CC asthma in a patient. The present sequence is used in the exemplification
CC of the invention
XX
SQ Sequence 27 AA;

Query Match 100.0%; Score 132; DB 6; Length 27;
Best Local Similarity 100.0%; Pred. No. 8.1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
||||||||||||||||||||||||||||
Db 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 8
ADC87728
ID ADC87728 standard; peptide; 27 AA.
XX
AC ADC87728;
XX
DT 01-JAN-2004 (first entry)
XX
DE Human secretin, SEQ ID NO:7.
XX
KW Quantitative analysis; neuropeptide; PACAP;
KW pituitary gland adenylate cyclase activated polypeptide; VIP;
KW vasoactive intestinal polypeptide; enzyme immunoassay; EIA;
KW biotinylated peptide; human; glucagon.
XX
OS Homo sapiens.
XX
PN JP2003161732-A.
XX
PD 06-JUN-2003.
XX
PF 28-NOV-2001; 2001JP-00363152.
XX
PR 28-NOV-2001; 2001JP-00363152.
XX
PA (ITOH-) ITO HAM KK.
XX
DR WPI; 2003-639687/61.
XX
PT Quantitative analysis of neuropeptide such as pituitary gland adenylate
PT cyclase activated polypeptide, involves performing enzyme immunoassay by
PT coupling biotin to N-terminal.
XX

PS Example 4; SEQ ID NO 7; 14pp; Japanese.
XX
CC The invention relates to a method for the quantitative analysis of
CC neuropeptides, especially PACAP (pituitary gland adenylate cyclase
CC activated polypeptide) or VIP (vasoactive intestinal polypeptide). The
CC method involves enzyme immunoassay (EIA) of N-terminally biotinylated
CC PACAP or VIP. The method permits the effective quantitative analysis of
CC neuropeptides, particularly PACAP and VIP, with high sensitivity and
CC without the need to use a radioisotope. The method also permits the
CC selective assay of PACAP27 or PACAP38. The present sequence represents
CC human secretin which was used in an example of the invention.
XX
SQ Sequence 27 AA;

Query Match 100.0%; Score 132; DB 7; Length 27;
Best Local Similarity 100.0%; Pred. No. 8.1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
||||||||||||||||||||||||||||
Db 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 9
ADN03397
ID ADN03397 standard; peptide; 27 AA.
XX
AC ADN03397;
XX
DT 17-JUN-2004 (first entry)
XX
DE Exemplary peptide ligand for proteome analysis #123.
XX
KW Peptide ligand; proteome; capture compound; mass spectrometry;
KW protein separation;
KW matrix assisted laser desorption ionisation-time of flight; MALDI-TOF.
XX
OS Unidentified.
XX
PN US2003119021-A1.
XX
PD 26-JUN-2003.
XX
PF 16-JUL-2002; 2002US-00197954.
XX
PR 16-JUL-2001; 2001US-0306019P.
PR 21-AUG-2001; 2001US-0314123P.
PR 11-MAR-2002; 2002US-0363433P.
XX
PA (KOST/) KOSTER H.
PA (SIDD/) SIDDIQI S.
PA (LITT/) LITTLE D P.
XX
PI Koster H, Siddiqi S, Little DP;
XX
DR WPI; 2004-059185/06.
XX

PT Collection of capture compounds capable of binding to biomolecules to
PT form complexes that are stable under mass spectrometry conditions, useful
PT for analysis of biomolecules, especially proteins.
XX
PS Disclosure; SEQ ID NO 123; 165pp; English.
XX
CC The invention relates to a collection of capture compounds capable of
CC binding to biomolecules to form complexes that are stable under mass
CC spectrometry conditions. The formulae for the capture compounds comprises
CC sets of compounds of formula (I)-(III) given in the specification. Also
CC included are analysis of biomolecules (by contacting a composition
CC comprising a biomolecule with the above collection and identifying or
CC detecting bound biomolecules), separating protein conformers (by
CC contacting a composition comprising a biomolecule with the above
CC collection, separating the members of the collection and identifying
CC bound proteins), reducing diversity of a complex mixture of biomolecules
CC (by contacting the mixture with the above collection and separating each
CC set of complexes of capture compounds with biomolecules from the other
CC sets) and identifying phenotype-specific biomolecules (by sorting cells
CC from a single subject into sets according to a phenotype, contacting
CC mixtures of biomolecules from each set with the above collection and
CC comparing the patterns of biomolecule binding from each set). The
CC collection of capture compounds is useful for the analysis of
CC biomolecules, especially proteins (e.g. analysis of a proteome), using
CC mass spectrometry, especially matrix assisted laser desorption ionisation
CC -time of flight (MALDI-TOF) mass spectrometry. The present sequence is an
CC exemplary peptide ligand which may be incorporated into a capture
CC compound of the invention.
XX
SQ Sequence 27 AA;

Query Match 100.0%; Score 132; DB 8; Length 27;
Best Local Similarity 100.0%; Pred. No. 8.1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
||||||||||||||||||||||||||||
Db 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 10
ADR42232
ID ADR42232 standard; peptide; 27 AA.
XX
AC ADR42232;
XX
DT 21-OCT-2004 (first entry)
XX
DE Secretin related peptide ligand, SEQ ID 123.
XX
KW Human; ligand; Secretin.
XX
OS Homo sapiens.
XX
PN WO2004064972-A2.
XX
PD 05-AUG-2004.

XX
PF 16-JAN-2004; 2004WO-US001037.
XX
PR 16-JAN-2003; 2003US-0441398P.
XX
PA (HKPH-) HK PHARM INC.
PA (KOES/) KOESTER H.
XX
PI Koester H, Little DP, Siddiqi SM, Grealish MP, Marappan S;
PI Hassman CF, Yip P;
XX
DR WPI; 2004-642213/62.
XX
PT Identifying drug non-target biomolecules in mixture of biomolecules
PT involves interacting mixture of biomolecules with capture compounds
PT having high binding affinity and analyzing captured biomolecules to
PT identify drug non-targets.
XX
PS Disclosure; SEQ ID NO 123; 368pp; English.
XX
CC The present invention relates to a method for identifying drug non-target
CC biomolecules in a mixture of biomolecules. The method comprises
CC interacting mixture with capture compounds having moiety X which
CC covalently binds to biomolecules with high affinity, moiety Y that
CC increases selectivity of binding so that the capture compound binds to
CC fewer biomolecules, and moiety Z for presenting X and Y, and analysing
CC captured biomolecules to identify drug non-targets. The capture compound
CC also optionally comprises a sorting function moiety Q and or a solubility
CC function moiety W. The selectivity function moiety Y serves to modulate
CC the reactivity function by reducing the number of groups to which the
CC reactivity function moiety X bind, such as by steric hindrance and other
CC interactions. Y is optionally a peptide ligand (ADR42112-ADR42256).
XX
SQ Sequence 27 AA;

Query Match 100.0%; Score 132; DB 8; Length 27;
Best Local Similarity 100.0%; Pred. No. 8.1e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
||||||||||||||||||||||||||||
Db 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 11
AAP91869
ID AAP91869 standard; peptide; 28 AA.
XX
AC AAP91869;
XX
DT 25-MAR-2003 (revised)
DT 02-FEB-1990 (first entry)
XX
DE Human secretin precursor.
XX
KW Human secretin precursor; anti-ulcer.
XX

OS Homo sapiens.
XX
PN JP01215296-A.
XX
PD 29-AUG-1989.
XX
PF 23-FEB-1988; 88JP-00041615.
XX
PR 23-FEB-1988; 88JP-00041615.
XX
PA (WAKT) WAKUNAGA SEIYAKU KK.
XX
DR WPI; 1989-290775/40.
DR N-PSDB; AAN91221.
XX
PT Human secretin precursor, for antiulcer drug - is prepd. by prepn. of
PT human secretin precursor coding gene, prepn. of recombinant vector, etc.
XX
PS Claim 1; Page 649; 5pp; Japanese.
XX
CC The peptide has the drug effect of secretin, but has stronger biological
CC activity than natural secretin. It is used as an anti-ulcer drug. It is
CC recovered from Escherichia sp. transformed with a vector contg. the
CC peptide gene by acid extn., removal of impurities by alkali addn., and
CC purificn. by reverse phase chromatography. X= GKR; GK; GR; GRK; or is
CC absent. (Updated on 25-MAR-2003 to correct PA field.)
XX
SQ Sequence 28 AA;

  Query Match   100.0%; Score 132; DB 1; Length 28;
  Best Local Similarity   100.0%; Pred. No. 8.4e-12;
  Matches   27; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

Qy   1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||||||||||||||||||||||||||
Db   1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 12
AAP90130
ID AAP90130 standard; protein; 31 AA.
XX
AC AAP90130;
XX
DT 24-OCT-2003 (revised)
DT 25-MAR-2003 (revised)
DT 01-NOV-1989 (first entry)
XX
DE Human secretin.
XX
KW Human secretin; fusion protein; recombinant vector.
XX
OS Homo sapiens; (Human).
XX
PN JP01144981-A.
XX
PD 07-JUN-1989.

XX
PF 02-DEC-1987; 87JP-00304937.
XX
PR 02-DEC-1987; 87JP-00304937.
XX
PA (WAKT) WAKUNAGA SEIYAKU KK.
XX
DR WPI; 1989-209284/29.
DR N-PSDB; AAN90270.
XX
PT Recombinant vector contg. fused protein aminoacid coding - composed of
PT growth hormone or its polypeptide deriv. and foreign protein.
XX
PS Disclosure; Fig 3; 19pp; Japanese.
XX
CC Human secretin (see AAN90270). The invention consists of a vector contg.
CC a fusion protein which is formed by ligating, downstream of a promoter,
CC human growth hormone or a deriv. (see AAN90269) and a foreign protein.
CC Stability of the vector in the host is greatly increased so the protein
CC yield is higher. (Updated on 25-MAR-2003 to correct PA field.) (Updated
CC on 24-OCT-2003 to standardise OS field)
XX
SQ Sequence 31 AA;

  Query Match   100.0%; Score 132; DB 1; Length 31;
  Best Local Similarity   100.0%; Pred. No. 9.3e-12;
  Matches   27; Conservative   0; Mismatches   0; Indels   0; Gaps   0;

Qy   1 HSDGTFTSELSRLREGARLQRLLQGLV 27
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Db   2 HSDGTFTSELSRLREGARLQRLLQGLV 28

RESULT 13
AAO21664
ID AAO21664 standard; protein; 121 AA.
XX
AC AAO21664;
XX
DT 05-SEP-2002 (first entry)
XX
DE Human secreted protein SEQ ID No 6.
XX
KW Antiarteriosclerotic; cytostatic; HIV; antiallergic; antianaemic;
KW antiasthmatic; cardiant; vasotropic; neuroprotective; nootropic; SECP;
KW anticonvulsant; antiparkinsonian; cerebroprotective; antiinflammatory;
KW immunosuppressive; human secreted protein; cell proliferative disorder;
KW arteriosclerosis; cancer; autoimmune; inflammatory disorder; AIDS;
KW allergy; anaemia; asthma; cardiovascular disease; developmental disorder;
KW ischaemic heart disease; congestive heart failure; neurological disorder;
KW renal tubular acidosis; hypothyroidism; Alzheimer's disease; dementia;
KW Parkinson's disease; epilepsy; stroke; knockin humanised animal;
KW transgenic animal; gene therapy.
XX
OS Homo sapiens.
XX
PN WO200238602-A2.

XX
PD 16-MAY-2002.
XX
PF 08-NOV-2001; 2001WO-US047420.
XX
PR 08-NOV-2000; 2000US-0247505P.
PR 09-NOV-2000; 2000US-0248642P.
PR 16-NOV-2000; 2000US-0249824P.
PR 21-NOV-2000; 2000US-0252824P.
PR 08-DEC-2000; 2000US-0254305P.
PR 18-DEC-2000; 2000US-0256448P.
XX
PA (INCY-) INCYTE GENOMICS INC.
XX
PI Yue H, Yao MG, Gandhi AR, Baughn MR, Swarnakar A, Walia NK;
PI Sanjanwala M, Thornton M, Elliott VS, Lu Y, Gietzen KJ, Burford N;
PI Ding L, Hafalia AJA, Tang YT, Bandman O, Warren BA, Honchell CD;
PI Lu DAM, Thangavelu K, Lee S, Xu Y, Yang J, Lal PG, Tran B;
PI Ison CH, Duggan BM, Sapperstein SK;
XX
DR WPI; 2002-519296/55.
DR N-PSDB; AAL39625.
XX
PT Human secreted proteins and polynucleotides for diagnosing, treating or
PT preventing disorders of cell proliferative, cardiovascular,
PT developmental, neurological and autoimmune/inflammatory disorders.
XX
PS Claim 1; Page 156; 229pp; English.
XX
CC The invention relates to an isolated human secreted protein (SECP)
CC polypeptide from 63 fully defined protein sequences given in the
CC specification. The polypeptide is useful for the diagnosing/treating of a
CC disease with decreased/overexpression of SECP. Examples of disorders
CC associated with abnormal expression of SECP include a cell proliferative
CC disorder e.g. arteriosclerosis, cancers; autoimmune/inflammatory
CC disorder, AIDS, allergies, anaemia, asthma; cardiovascular disease e.g.
CC congestive heart failure, ischaemic heart disease; developmental disorder
CC e.g. renal tubular acidosis, hypothyroidism; neurological disorder e.g.
CC Alzheimer's disease, dementia, Parkinson's disease, epilepsy or stroke.
CC The SECP polynucleotide and polypeptide are further useful for analysing
CC the proteome of a tissue or a cell type. The polynucleotide is useful for
CC creating knockin humanised animals (pigs) or transgenic animals (mice or
CC rats) to model human disease, and for somatic or germline gene therapy,
CC and further for generating hybridisation probes useful in mapping the
CC naturally occurring genomic sequence. This sequence represents a human
CC secreted protein of the invention
XX
SQ Sequence 121 AA;

Query Match 100.0%; Score 132; DB 5; Length 121;
Best Local Similarity 100.0%; Pred. No. 3.9e-11;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
||||||||||||||||||||||||||
Db 28 HSDGTFTSELSRLREGARLQRLLQGLV 54

RESULT 14
AAB91259
ID AAB91259 standard; peptide; 27 AA.
XX
AC AAB91259;
XX
DT 22-JUN-2001 (first entry)
XX
DE Secretin peptide SEQ ID NO:435.
XX
KW Protection; endogenous therapeutic peptide; peptidase; conjugation;
KW blood component; modification; succinimidyl; maleimido group; amino;
KW hydroxyl; thiol; hormone; growth factor; neurotransmitter.
XX
OS Homo sapiens.
OS Synthetic.
XX
PN WO200069900-A2.
XX
PD 23-NOV-2000.
XX
PF 17-MAY-2000; 2000WO-US013576.
XX
PR 17-MAY-1999; 99US-0134406P.
PR 10-SEP-1999; 99US-0153406P.
PR 15-OCT-1999; 99US-0159783P.
XX
PA (CONJ-) CONJUCHEM INC.
XX
PI Bridon DP, Ezrin AM, Milner PG, Holmes DL, Thibaudeau K;
XX
DR WPI; 2001-112059/12.
XX
PT Modifying and attaching therapeutic peptides to albumin prevents
PT peptidase degradation, useful for increasing length of in vivo activity.
XX
PS Disclosure; Page 340; 733pp; English.
XX
CC The present invention describes a modified therapeutic peptide (I)
CC comprising a therapeutically active amino acid region (III) and a
CC reactive group (II) (e.g. succinimidyl and maleimido groups) attached to
CC a less therapeutically active amino acid region (IV), which covalently
CC bonds with amino/hydroxyl/thiol groups on blood components to form a
CC peptidase stabilised therapeutic peptide composed of 3-50 amino acids.
CC (I) are useful for modifying therapeutic peptides e.g. hormones, growth
CC factors and neurotransmitters, to protect them from peptidase activity in
CC vivo for the treatment of various disorders. Endogenous therapeutic
CC peptides are not suitable as drug candidates as they require frequent
CC administration due to rapid degradation by peptidases in the body.
CC Modifying and attaching therapeutic peptides to albumin prevents or
CC reduces the action of peptidases to increase length of activity (half
CC life) and specificity as bonding to large molecules decreases
CC intracellular uptake and interference with physiological processes.
CC AAB90829 to AAB92441 represent peptides which can be used in the
CC exemplification of the present invention
XX

SQ Sequence 27 AA;

Query Match 95.5%; Score 126; DB 4; Length 27;
Best Local Similarity 96.3%; Pred. No. 6e-11;
Matches 26; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
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Db          1 HSDGTFTSELSRLRESARLQRLLQGLV 27
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RESULT 15
ABR40227
ID ABR40227 standard; peptide; 27 AA.
XX
AC ABR40227;
XX
DT 12-JUN-2003 (first entry)
XX
DE Canine secretin.
XX
KW Dog; asthma; anion efflux; secretin receptor; antiasthmatic; secretin.
XX
OS Canis sp.
XX
PN WO2003011327-A2.
XX
PD 13-FEB-2003.
XX
PF 26-JUL-2002; 2002WO-GB003433.
XX
PR 27-JUL-2001; 2001GB-00018383.
XX
PA (PHAR-) PHARMAGENE LAB LTD.
XX
PI Davis RJ, Clark K;
XX
DR WPI; 2003-248115/24.
XX
PT Treating asthma in a patient suffering from asthma, by administering to
PT the patient an agent e.g., secretin which triggers anion efflux in
PT respiratory tissue by the activation of a secretin receptor.
XX
PS Disclosure; Fig 1; 40pp; English.
XX
CC The invention relates to a novel method for treating asthma in a patient
CC suffering from asthma, involving administering to the patient an
CC effective amount of an agent which triggers anion efflux in respiratory
CC tissue by the activation of a secretin receptor. The method of the
CC invention has antiasthmatic activity. The method is useful for treating
CC asthma in a patient. The present sequence is used in the exemplification
CC of the invention
XX
SQ Sequence 27 AA;

Query Match 95.5%; Score 126; DB 6; Length 27;
Best Local Similarity 96.3%; Pred. No. 6e-11;

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  Matches   26;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
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Db          1 HSDGTFTSELSRLRESARLQRLLQGLV 27


Search completed: March 16, 2005, 12:41:06
Job time : 102.333 secs
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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 16, 2005, 12:32:58 ; Search time 25.6667 Seconds
(without alignments)
78.527 Million cell updates/sec

Title: US-10-822-677-10
Perfect score: 132
Sequence: 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
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6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	132	100.0	27	1	US-07-924-054-10	Sequence 10, Appl
2	132	100.0	27	1	US-08-062-472B-43	Sequence 43, Appl
3	132	100.0	27	4	US-09-897-412-10	Sequence 10, Appl
4	126	95.5	27	4	US-09-897-412-12	Sequence 12, Appl
5	123	93.2	27	1	US-08-519-180-6	Sequence 6, Appli
6	123	93.2	27	2	US-08-818-253-36	Sequence 36, Appl
7	123	93.2	27	3	US-08-818-252-36	Sequence 36, Appl
8	123	93.2	27	3	US-09-260-846-18	Sequence 18, Appl
9	123	93.2	27	3	US-08-842-322-30	Sequence 30, Appl
10	123	93.2	27	4	US-09-316-919-52	Sequence 52, Appl
11	123	93.2	27	4	US-09-316-920A-52	Sequence 52, Appl

12	123	93.2	27	4	US-09-897-412-11	Sequence 11, Appl
13	120	90.9	27	1	US-07-822-924-10	Sequence 10, Appl
14	120	90.9	27	5	PCT-US93-00683-10	Sequence 10, Appl
15	119	90.2	36	4	US-09-230-896C-21	Sequence 21, Appl
16	108.5	82.2	26	1	US-07-776-272-25	Sequence 25, Appl
17	67	50.8	320	4	US-09-252-991A-30676	Sequence 30676, A
18	66	50.0	30	4	US-09-147-345A-36	Sequence 36, Appl
19	65	49.2	29	4	US-09-847-249A-10	Sequence 10, Appl
20	64	48.5	29	4	US-09-847-249A-30	Sequence 30, Appl
21	64	48.5	29	4	US-09-847-249A-38	Sequence 38, Appl
22	64	48.5	29	4	US-09-847-249A-73	Sequence 73, Appl
23	64	48.5	29	4	US-09-847-249A-74	Sequence 74, Appl
24	64	48.5	29	4	US-09-847-249A-75	Sequence 75, Appl
25	64	48.5	29	4	US-09-847-249A-76	Sequence 76, Appl
26	63	47.7	29	4	US-09-847-249A-25	Sequence 25, Appl
27	63	47.7	29	4	US-09-847-249A-28	Sequence 28, Appl
28	63	47.7	29	4	US-09-847-249A-34	Sequence 34, Appl
29	63	47.7	29	4	US-09-847-249A-44	Sequence 44, Appl
30	63	47.7	30	4	US-09-147-345A-106	Sequence 106, App
31	62	47.0	29	4	US-09-847-249A-9	Sequence 9, Appli
32	62	47.0	29	4	US-09-847-249A-11	Sequence 11, Appl
33	62	47.0	30	4	US-09-147-345A-37	Sequence 37, Appl
34	62	47.0	31	3	US-09-209-799D-26	Sequence 26, Appl
35	62	47.0	31	4	US-09-997-792A-23	Sequence 23, Appl
36	61	46.2	29	4	US-09-847-249A-32	Sequence 32, Appl
37	61	46.2	29	4	US-09-847-249A-40	Sequence 40, Appl
38	61	46.2	29	4	US-09-847-249A-66	Sequence 66, Appl
39	61	46.2	29	4	US-09-847-249A-67	Sequence 67, Appl
40	61	46.2	29	4	US-09-847-249A-70	Sequence 70, Appl
41	61	46.2	30	4	US-09-147-345A-110	Sequence 110, App
42	61	46.2	30	4	US-09-147-345A-114	Sequence 114, App
43	61	46.2	37	3	US-09-302-596-11	Sequence 11, Appl
44	61	46.2	37	3	US-09-333-415-11	Sequence 11, Appl
45	61	46.2	37	4	US-09-303-016-11	Sequence 11, Appl

ALIGNMENTS

```
RESULT 1
US-07-924-054-10
; Sequence 10, Application US/07924054
; Patent No. 5486472
;  GENERAL INFORMATION:
;    APPLICANT:  SUZUKI, No. 5486472uhiro
;    APPLICANT:  KITADA, Chieko
;    APPLICANT:  TSUDA, Masao
;    TITLE OF INVENTION:  ANTIBODY TO PACAP AND USE THEREOF
;    NUMBER OF SEQUENCES:  11
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  DAVID G. CONLIN; DIKE, BRONSTEIN, ROBERTS&
;      ADDRESSEE:  CUSHMAN
;      STREET:  130 Water Street
;      CITY:  Boston
;      STATE:  Massachusetts
;      COUNTRY:  US
;      ZIP:  02109
```

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;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/924,054
;      FILING DATE:  19920903
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  RESNICK, David S
;      REGISTRATION NUMBER:  34235
;      REFERENCE/DOCKET NUMBER:  40805
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617)523-3400
;      TELEFAX:  (617)523-6440
;      TELEX:  200291 STRE UR
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  27 amino acids
;      TYPE:  AMINO ACID
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-07-924-054-10

  Query Match             100.0%;  Score 132;  DB 1;  Length 27;
  Best Local Similarity   100.0%;  Pred. No. 8.5e-13;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
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Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27


RESULT 2
US-08-062-472B-43
; Sequence 43, Application US/08062472B
; Patent No. 5695954
;  GENERAL INFORMATION:
;    APPLICANT:  Sherwood, Nancy G M
;    APPLICANT:  Parker, David B
;    APPLICANT:  McRory, John E
;    APPLICANT:  Lescheid, David W
;    TITLE OF INVENTION:  DNA ENCODING TWO FISH NEUROPEPTIDES
;    NUMBER OF SEQUENCES:  49
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  KLARQUIST, SPARKMAN, CAMPBELL, LEIGH &
;      ADDRESSEE:  WHINSTON, LLP
;      STREET:  ONE WORLD TRADE CENTER, SUITE 1600, 121 S.W.
;      STREET:  SALMON STREET
;      CITY:  PORTLAND
;      STATE:  OREGON
;      COUNTRY:  USA
;      ZIP:  97204-2988
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
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;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/062,472B
;       FILING DATE:  14-MAY-1993
;       CLASSIFICATION:  435
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  POLLEY, RICHARD J
;       REGISTRATION NUMBER:  28107
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (503) 226-7391
;       TELEFAX:  (503) 228-9446
;   INFORMATION FOR SEQ ID NO:  43:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  27 amino acids
;       TYPE:  amino acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  peptide
US-08-062-472B-43

  Query Match             100.0%;  Score 132;  DB 1;  Length 27;
  Best Local Similarity   100.0%;  Pred. No. 8.5e-13;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27


RESULT 3
US-09-897-412-10
; Sequence 10, Application US/09897412
; Patent No. 6780839
; GENERAL INFORMATION:
;  APPLICANT: Davis, Richard J
;  APPLICANT:  Page, Keith J
;  TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
;  TITLE OF INVENTION:  Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
;  TITLE OF INVENTION:  (COPD)
;  FILE REFERENCE: 620-148
;  CURRENT APPLICATION NUMBER: US/09/897,412
;  CURRENT FILING DATE:  2001-07-03
;  PRIOR APPLICATION NUMBER: GB 0016441.8
;  PRIOR FILING DATE: 2000-07-04
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-897-412-10

  Query Match             100.0%;  Score 132;  DB 4;  Length 27;
  Best Local Similarity   100.0%;  Pred. No. 8.5e-13;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
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RESULT 4
US-09-897-412-12
; Sequence 12, Application US/09897412
; Patent No. 6780839
; GENERAL INFORMATION:
; APPLICANT: Davis, Richard J
; APPLICANT: Page, Keith J
; TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
; TITLE OF INVENTION: Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
; TITLE OF INVENTION: (COPD)
; FILE REFERENCE: 620-148
; CURRENT APPLICATION NUMBER: US/09/897,412
; CURRENT FILING DATE: 2001-07-03
; PRIOR APPLICATION NUMBER: GB 0016441.8
; PRIOR FILING DATE: 2000-07-04
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Canis sp.
US-09-897-412-12

Query Match 95.5%; Score 126; DB 4; Length 27;
Best Local Similarity 96.3%; Pred. No. 6.5e-12;
Matches 26; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||||||||||||| ||||||||||
Db          1 HSDGTFTSELSRLRESARLQRLLQGLV 27
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RESULT 5
US-08-519-180-6
; Sequence 6, Application US/08519180
; Patent No. 5770570
; GENERAL INFORMATION:
; APPLICANT: PAUL, SUDHIR
; APPLICANT: YASUKO, NODA
; APPLICANT: ISRAEL, RUBINSTEIN
; TITLE OF INVENTION: A METHOD OF DELIVERING A VASOACTIVE
; TITLE OF INVENTION: INTESTINAL POLYPEPTIDE, AN ENCAPSULATED VASOACTIVE
; TITLE OF INVENTION: INTESTINAL POLYPEPTIDE, AND A METHOD OF MAKING THE
; TITLE OF INVENTION: ENCAPSULATED VASOACTIVE INTESTINAL POLYPEPTIDE
; NUMBER OF SEQUENCES: 13
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: CUSHMAN, DARBY & CUSHMAN
; STREET: 1100 NEW YORK AVENUE, N.W.
; CITY: WASHINGTON
; STATE: D.C.
; COUNTRY: USA
; ZIP: 20005

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;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Floppy disk
;       COMPUTER:  IBM PC compatible
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.25
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/519,180
;       FILING DATE:  25-AUG-1995
;       CLASSIFICATION:  514
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:  US 08/224488
;       FILING DATE:  07-APR-1994
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  SEMINAUER, JEFFREY A.
;       REGISTRATION NUMBER:  31,933
;       REFERENCE/DOCKET NUMBER:  4464/98971
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  202-861-3000
;       TELEFAX:  202-822-0944
;       TELEX:  6714627 CUSH
;   INFORMATION FOR SEQ ID NO:  6:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  27 amino acids
;       TYPE:  amino acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  peptide
US-08-519-180-6

  Query Match             93.2%;  Score 123;  DB 1;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 1.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 6
US-08-818-253-36
; Sequence 36, Application US/08818253
; Patent No. 5998204
;  GENERAL INFORMATION:
;     APPLICANT:  Tsien, Roger Y.
;     APPLICANT:  Miyawaki, Atsushi
;     TITLE OF INVENTION:  FLUORESCENT PROTEIN SENSORS FOR
;     TITLE OF INVENTION:  DETECTION OF ANALYTES
;     NUMBER OF SEQUENCES:  61
;     CORRESPONDENCE ADDRESS:
;       ADDRESSEE:  Fish & Richardson P.C.
;       STREET:  4225 Executive Square, Suite 1400
;       CITY:  La Jolla
;       STATE:  CA
;       COUNTRY:  USA
;       ZIP:  92037
;     COMPUTER READABLE FORM:
;       MEDIUM TYPE:  Diskette
```

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;       COMPUTER:  IBM Compatible
;       OPERATING SYSTEM:  Windows 95
;       SOFTWARE:  FastSEQ for Windows Version 2.0b
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/818,253
;       FILING DATE:  14-MAR-1997
;     PRIOR APPLICATION DATA:
;       APPLICATION NUMBER:
;       FILING DATE:
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  Haile, Ph.D., Lisa A.
;       REGISTRATION NUMBER:  38,347
;       REFERENCE/DOCKET NUMBER:  07257/043001
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  619/678-5070
;       TELEFAX:  619/678-5099
;   INFORMATION FOR SEQ ID NO:  36:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  27 amino acids
;       TYPE:  amino acid
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  peptide
US-08-818-253-36

  Query Match             93.2%;  Score 123;  DB 2;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 1.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 7
US-08-818-252-36
; Sequence 36, Application US/08818252B
; Patent No. 6197928
; GENERAL INFORMATION:
;  APPLICANT: Tsien, Roger Y.
;  APPLICANT: Miyawaki, Atsushi
;  TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
;  TITLE OF INVENTION: DETECTION OF ANALYTES
;  FILE REFERENCE: 07257/042001
;  CURRENT APPLICATION NUMBER: US/08/818,252B
;  CURRENT FILING DATE: 1997-03-14
;  NUMBER OF SEQ ID NOS: 56
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 36
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Sus scrofa
US-08-818-252-36

  Query Match             93.2%;  Score 123;  DB 3;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 1.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;
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Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 8
US-09-260-846-18
; Sequence 18, Application US/09260846
; Patent No. 6307017
; GENERAL INFORMATION:
;  APPLICANT: Coy, David H.
;  APPLICANT: Moreau, Jacques-Pierre
;  APPLICANT: Kim, Sun Hyuk
;  TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
;  FILE REFERENCE: 00537/00900J
;  CURRENT APPLICATION NUMBER: US/09/260,846
;  CURRENT FILING DATE: 1999-03-02
;  NUMBER OF SEQ ID NOS: 25
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 18
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: mammalian
;   FEATURE:
;   OTHER INFORMATION: Porcine/Bovine
;   FEATURE:
;   OTHER INFORMATION: this peptide has an amidated c-terminus
US-09-260-846-18

  Query Match             93.2%;  Score 123;  DB 3;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 1.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 9
US-08-842-322-30
; Sequence 30, Application US/08842322
; Patent No. 6376257
;  GENERAL INFORMATION:
;    APPLICANT:  Persechini, Anthony
;    TITLE OF INVENTION:  DETECTION BY FRET CHANGES OF LIGAND
;    TITLE OF INVENTION:  BINDING BY GFP FUSION PROTEINS
;    NUMBER OF SEQUENCES:  33
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  NIXON, HARGRAVE, DEVANS & DOYLE LLP
;      STREET:  Clinton Square, P.O. Box 1051
;      CITY:  Rochester
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  14603
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
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```
;       OPERATING SYSTEM:  PC-DOS/MS-DOS
;       SOFTWARE:  PatentIn Release #1.0, Version #1.30
;     CURRENT APPLICATION DATA:
;       APPLICATION NUMBER:  US/08/842,322
;       FILING DATE:
;       CLASSIFICATION:  436
;     ATTORNEY/AGENT INFORMATION:
;       NAME:  BRAMAN, SUSAN J.
;       REGISTRATION NUMBER:  34,103
;       REFERENCE/DOCKET NUMBER:  176/60170
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  716-263-1636
;       TELEFAX:  716-263-1600
;   INFORMATION FOR SEQ ID NO:  30:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  27 amino acids
;       TYPE:  amino acid
;       STRANDEDNESS:  not relevant
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  peptide
US-08-842-322-30

  Query Match             93.2%;  Score 123;  DB 3;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 1.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 10
US-09-316-919-52
; Sequence 52, Application US/09316919
; Patent No. 6469154
; GENERAL INFORMATION:
;  APPLICANT: Tsien, Roger Y.
;  APPLICANT: Baird, Geoffrey
;  TITLE OF INVENTION: FLUORESCENT PROTEIN INDICATORS
;  FILE REFERENCE: 07257/073001
;  CURRENT APPLICATION NUMBER: US/09/316,919
;  CURRENT FILING DATE: 1999-05-21
;  NUMBER OF SEQ ID NOS: 63
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 52
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Sus scrofa
US-09-316-919-52

  Query Match             93.2%;  Score 123;  DB 4;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 1.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27
```

```
RESULT 11
US-09-316-920A-52
; Sequence 52, Application US/09316920A
; Patent No. 6699687
; GENERAL INFORMATION:
;  APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
;  APPLICANT:  Tsien, Roger Y.
;  APPLICANT:  Baird, Geoffrey
;  TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
;  FILE REFERENCE: REGEN1470
;  CURRENT APPLICATION NUMBER: US/09/316,920A
;  CURRENT FILING DATE:  1999-05-21
;  NUMBER OF SEQ ID NOS: 63
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 52
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Sus scrofa
US-09-316-920A-52

  Query Match             93.2%;  Score 123;  DB 4;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 1.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||| |||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 12
US-09-897-412-11
; Sequence 11, Application US/09897412
; Patent No. 6780839
; GENERAL INFORMATION:
;  APPLICANT: Davis, Richard J
;  APPLICANT:  Page, Keith J
;  TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
;  TITLE OF INVENTION:  Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
;  TITLE OF INVENTION:  (COPD)
;  FILE REFERENCE: 620-148
;  CURRENT APPLICATION NUMBER: US/09/897,412
;  CURRENT FILING DATE:  2001-07-03
;  PRIOR APPLICATION NUMBER: GB 0016441.8
;  PRIOR FILING DATE: 2000-07-04
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Sus sp.
US-09-897-412-11

  Query Match             93.2%;  Score 123;  DB 4;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 1.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;
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```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 13
US-07-822-924-10
; Sequence 10, Application US/07822924
; Patent No. 5258453
;  GENERAL INFORMATION:
;    APPLICANT:  J. Kopecek et al.
;    TITLE OF INVENTION:  A DRUG DELIVERY SYSTEM FOR THE
;    TITLE OF INVENTION:  SIMULTANEOUS DELIVERY OF DRUGS ACTIVATABLE BY ENZYMES
AND
;    TITLE OF INVENTION:  LIGHT
;    NUMBER OF SEQUENCES:  Ten
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Thorpe, No. 5258453th & Western
;      STREET:  9035 South 700 East, Suite 200
;      CITY:  Sandy
;      STATE:  Utah
;      COUNTRY:  USA
;      ZIP:  84070
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.5 inch, 720 Kb storage
;      COMPUTER:  compaq LTE/286
;      OPERATING SYSTEM:  DOS 4.01
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/822,924
;      FILING DATE:  19920121
;      CLASSIFICATION:  514
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  none
;      FILING DATE:  na
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Western, M. Wayne
;      REGISTRATION NUMBER:  22,788
;      REFERENCE/DOCKET NUMBER:  T377
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (801) 566-6633
;      TELEFAX:  (801) 566-0750
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  27
;      TYPE:  AMINO ACID
;      TOPOLOGY:  linear
US-07-822-924-10

  Query Match             90.9%;  Score 120;  DB 1;  Length 27;
  Best Local Similarity   88.9%;  Pred. No. 5e-11;
  Matches   24;  Conservative    2;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||||||||||||: |||:|||||||
Db          1 HSDGTFTSELSRLRDSARLERLLQGLV 27
```

```
RESULT 14
PCT-US93-00683-10
; Sequence 10, Application PC/TUS9300683
;  GENERAL INFORMATION:
;    APPLICANT:  J. Kopecek et al.
;    TITLE OF INVENTION:  A DRUG DELIVERY SYSTEM FOR THE
;    TITLE OF INVENTION:  SIMULTANEOUS DELIVERY OF DRUGS ACTIVATABLE BY ENZYMES
AND
;    TITLE OF INVENTION:  LIGHT
;    NUMBER OF SEQUENCES:  10
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Thorpe, North & Western
;      STREET:  9035 South 700 East, Suite 200
;      CITY:  Sandy
;      STATE:  Utah
;      COUNTRY:  USA
;      ZIP:  84070
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette, 3.5 inch, 720 Kb storage
;      COMPUTER:  compaq LTE/286
;      OPERATING SYSTEM:  DOS 4.01
;      SOFTWARE:  Word Perfect 5.1
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US93/00683
;      FILING DATE:  19930121
;      CLASSIFICATION:
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US/07/822,924
;      FILING DATE:  21 JAN 1992
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Western, M. Wayne
;      REGISTRATION NUMBER:  22,788
;      REFERENCE/DOCKET NUMBER:  T377
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (801) 566-6633
;      TELEFAX:  (801) 566-0750
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  27
;      TYPE:  AMINO ACID
;      TOPOLOGY:  linear
PCT-US93-00683-10

  Query Match             90.9%;  Score 120;  DB 5;  Length 27;
  Best Local Similarity   88.9%;  Pred. No. 5e-11;
  Matches   24;  Conservative    2;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: |||:|||||||
Db          1 HSDGTFTSELSRLRDSARLERLLQGLV 27


RESULT 15
US-09-230-896C-21
; Sequence 21, Application US/09230896C
```

; Patent No. 6635479
; GENERAL INFORMATION:
; APPLICANT: The Scripps Research Institute
; APPLICANT: Sutcliffe, et al.
; TITLE OF INVENTION: Hypothalamus-Specific Polypeptides
; FILE REFERENCE: TSRI-548.1
; CURRENT APPLICATION NUMBER: US/09/230,896C
; CURRENT FILING DATE: 1999-02-02
; PRIOR APPLICATION NUMBER: 60/023,220
; PRIOR FILING DATE: 1996-08-02
; NUMBER OF SEQ ID NOS: 29
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 21
; LENGTH: 36
; TYPE: PRT
; ORGANISM: ratus ratus
US-09-230-896C-21

Query Match 90.2%; Score 119; DB 4; Length 36;
Best Local Similarity 88.9%; Pred. No. 9.7e-11;
Matches 24; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||:||||||: ||||||||||
Db          1 HSDGTFTSKLSRLRDSARLQRLLQGLV 27
```

Search completed: March 16, 2005, 12:48:19
Job time : 25.6667 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.

OM protein - protein search, using sw model

Run on: March 16, 2005, 12:32:17 ; Search time 19.3333 Seconds
(without alignments)
134.372 Million cell updates/sec

Title: US-10-822-677-10
Perfect score: 132
Sequence: 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	132	100.0	27	1	S07443	secretin - human
2	126	95.5	27	2	A27267	secretin - dog
3	123	93.2	27	1	SEBO	secretin - bovine
4	123	93.2	27	1	SESH	secretin - sheep
5	123	93.2	131	1	SEPG	secretin precursor
6	119	90.2	134	2	A40959	secretin precursor
7	115	87.1	26	1	B57082	secretin - guinea
8	113	85.6	133	2	JC2202	secretin precursor
9	112	84.8	27	2	C60415	secretin - rabbit
10	78	59.1	27	1	SECH	secretin - chicken
11	67	50.8	258	2	G83069	probable oxidoredu
12	61	46.2	38	1	HWGHS	exendin-1 - Mexica
13	61	46.2	180	1	GCGP	glucagon precursor

14	60	45.5	39	1	HWGH3Z	exendin-3 - Mexica
15	59	44.7	29	1	GCOPV	glucagon - North A
16	59	44.7	29	2	A91740	glucagon - turkey
17	59	44.7	29	2	C39258	glucagon - common
18	59	44.7	29	2	A91742	glucagon - Arabian
19	59	44.7	29	2	A91741	glucagon - rabbit
20	59	44.7	36	2	D60840	glucagon II - Euro
21	59	44.7	69	1	GCDG69	glucagon-69 - dog
22	59	44.7	101	1	GCFGB	glucagon precursor
23	59	44.7	151	1	GCCH	glucagon precursor
24	59	44.7	158	1	GCPG	glucagon precursor
25	59	44.7	180	1	GCBO	glucagon precursor
26	59	44.7	180	1	GCHY	glucagon precursor
27	59	44.7	180	1	GCHU	glucagon precursor
28	59	44.7	180	1	GCRT	glucagon precursor
29	59	44.7	180	2	A57294	glucagon precursor
30	59	44.7	206	2	I51301	proglucagon - chic
31	58	43.9	29	1	GCDF	glucagon - smaller
32	57	43.2	29	1	A61583	glucagon - ostrich
33	57	43.2	29	1	GCDK	glucagon - duck
34	57	43.2	29	1	GCTTS	glucagon - slider
35	57	43.2	29	2	C60840	glucagon I - Europ
36	57	43.2	29	2	S07211	glucagon - marbled
37	57	43.2	55	1	VRRB	vasoactive intesti
38	57	43.2	58	1	VRPG	vasoactive intesti
39	56	42.4	55	1	VRBO	vasoactive intesti
40	56	42.4	55	1	VRGP	vasoactive intesti
41	56	42.4	55	1	VRSH	vasoactive intesti
42	56	42.4	170	1	VRRT	vasoactive intesti
43	56	42.4	170	2	A60037	vasoactive intesti
44	56	42.4	180	1	GCRTDU	glucagon precursor
45	55	41.7	29	2	S39018	glucagon - bowfin

ALIGNMENTS

RESULT 1
S07443
secretin - human
C;Species: Homo sapiens (man)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: S07443
R;Carlquist, M.; Joernvall, H.; Forssmann, W.G.; Thulin, L.; Johansson, C.; Mutt, V.
IRCS Med. Sci. 13, 217-218, 1985
A;Title: Human secretin is not identical to the porcine/bovine hormone.
A;Reference number: S07443
A;Accession: S07443
A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-27 <CAR>
C;Genetics:
A;Gene: GDB:SCT
A;Cross-references: GDB:270550
A;Map position: Xp21.1-Xp21.1
C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; duplication
F;27/Modified site: amidated carboxyl end (Val) #status predicted

  Query Match 100.0%; Score 132; DB 1; Length 27;
  Best Local Similarity 100.0%; Pred. No. 1.3e-13;
  Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
    ||||||||||||||||||||||||||||
Db 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 2
A27267
secretin - dog
C;Species: Canis lupus familiaris (dog)
C;Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 09-Jul-2004
C;Accession: A27267
R;Shinomura, Y.; Eng, J.; Yalow, R.S.
Life Sci. 41, 1243-1248, 1987
A;Title: Dog secretin: sequence and biologic activity.
A;Reference number: A27267; MUID:87314204; PMID:3626755
A;Accession: A27267
A;Molecule type: protein
A;Residues: 1-27 <SHI>
A;Cross-references: UNIPROT:P09910
A;Experimental source: intestine
C;Superfamily: glucagon
C;Keywords: duplication

  Query Match 95.5%; Score 126; DB 2; Length 27;
  Best Local Similarity 96.3%; Pred. No. 1.1e-12;
  Matches 26; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
    |||||||||||||| ||||||||||
Db 1 HSDGTFTSELSRLRESARLQRLLQGLV 27

RESULT 3
SEBO
secretin - bovine
C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 20-Mar-1998
C;Accession: A91291; A01544
R;Carlquist, M.; Jornvall, H.; Mutt, V.
FEBS Lett. 127, 71-74, 1981
A;Title: Isolation and amino acid sequence of bovine secretin.
A;Reference number: A91291; MUID:81237102; PMID:7250377
A;Accession: A91291
A;Molecule type: protein
A;Residues: 1-27 <CAR>
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duodenal mucosa; duplication; hormone;
secretagogue
F;27/Modified site: amidated carboxyl end (Val) #status experimental

Query Match 93.2%; Score 123; DB 1; Length 27;
Best Local Similarity 92.6%; Pred. No. 3.1e-12;
Matches 25; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27
```

RESULT 4
SESH
secretin - sheep
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 09-Jul-2004
C;Accession: C60072
R;Bounjoua, Y.; Vandermeers, A.; Robberecht, P.; Vandermeers-Piret, M.C.; Christophe, J.
Regul. Pept. 32, 169-179, 1991
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide histidine isoleucinamide and secretin from the ovine small intestine.
A;Reference number: A60072; MUID:91239834; PMID:2034821
A;Accession: C60072
A;Molecule type: protein
A;Residues: 1-27 <BOU>
A;Cross-references: UNIPROT:P31299
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine
F;27/Modified site: amidated carboxyl end (Val) #status experimental

Query Match 93.2%; Score 123; DB 1; Length 27;
Best Local Similarity 92.6%; Pred. No. 3.1e-12;
Matches 25; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27
```

RESULT 5
SEPG
secretin precursor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 24-Apr-1984 #sequence_revision 12-Apr-1996 #text_change 09-Jul-2004
C;Accession: B35094; A01544; A36052
R;Kopin, A.S.; Wheeler, M.B.; Leiter, A.B.
Proc. Natl. Acad. Sci. U.S.A. 87, 2299-2303, 1990
A;Title: Secretin: structure of the precursor and tissue distribution of the mRNA.
A;Reference number: A35094; MUID:90192795; PMID:2315322
A;Accession: B35094
A;Molecule type: mRNA
A;Residues: 1-131 <KOP>
A;Cross-references: UNIPROT:P01279; GB:M31496; NID:g164670; PIDN:AAA31121.1; PID:g164671
R;Mutt, V.; Jorpes, J.E.; Magnusson, S.
Eur. J. Biochem. 15, 513-519, 1970
A;Title: Structure of porcine secretin. The amino acid sequence.

A;Reference number: A91147; MUID:70282334; PMID:5465996
A;Accession: A01544
A;Molecule type: protein
A;Residues: 30-56 <MUT>
A;Note: tryptic peptides were sequenced
R;Gafvelin, G.; Joernvall, H.; Mutt, V.
Proc. Natl. Acad. Sci. U.S.A. 87, 6781-6785, 1990
A;Title: Processing of prosecretin: isolation of a secretin precursor from porcine intestine.
A;Reference number: A36052; MUID:90370867; PMID:2395872
A;Accession: A36052
A;Status: preliminary
A;Molecule type: protein
A;Residues: 30-59,'R',92-131 <GAF>
R;Bodanszky, M.; Ondetti, M.A.; Levine, S.D.; Narayanan, V.L.; Saltza, M.V.; Sheehan, J.T.; Williams, N.J.; Sabo, E.F.
Chem. Ind. 1966, 1757-1758, 1966
A;Title: Synthesis of a heptacosapeptide amide with the hormonal activity of secretin.
A;Reference number: A90916
A;Contents: annotation
A;Note: synthesis confirmed the proposed structure of the natural hormone
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duodenal mucosa; duplication; hormone; secretagogue
F;1-18/Domain: signal sequence #status predicted <SIG>
F;30-56/Product: secretin #status experimental <MAT>
F;56/Modified site: amidated carboxyl end (Val) (amide in mature form from following glycine) #status experimental

  Query Match   93.2%; Score 123; DB 1; Length 131;
  Best Local Similarity   92.6%; Pred. No. 1.8e-11;
  Matches   25; Conservative   1; Mismatches   1; Indels   0; Gaps   0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db         30 HSDGTFTSELSRLRDSARLQRLLQGLV 56
```

RESULT 6
A40959
secretin precursor - rat
C;Species: Rattus norvegicus (Norway rat)
C;Date: 20-Mar-1992 #sequence_revision 20-Mar-1992 #text_change 09-Jul-2004
C;Accession: A40886; A40959; A35094; A32544
R;Itoh, N.; Furuya, T.; Ozaki, K.; Ohta, M.; Kawasaki, T.
J. Biol. Chem. 266, 12595-12598, 1991
A;Title: The secretin precursor gene. Structure of the coding region and expression in the brain.
A;Reference number: A40886; MUID:91286291; PMID:2061329
A;Accession: A40886
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-134 <ITO>
A;Cross-references: UNIPROT:P11384; GB:M63984; NID:g206889; PIDN:AAA42127.1; PID:g206890

R;Kopin, A.S.; Wheeler, M.B.; Nishitani, J.; McBride, E.W.; Chang, T.; Chey, W.Y.; Leiter, A.B.
Proc. Natl. Acad. Sci. U.S.A. 88, 5335-5339, 1991
A;Title: The secretin gene: evolutionary history, alternative splicing, and developmental regulation.
A;Reference number: A40959; MUID:91271384; PMID:1711228
A;Accession: A40959
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-134 <KOP>
A;Cross-references: GB:M64033; NID:g206891; PIDN:AAA42128.1; PID:g206892
R;Kopin, A.S.; Wheeler, M.B.; Leiter, A.B.
Proc. Natl. Acad. Sci. U.S.A. 87, 2299-2303, 1990
A;Title: Secretin: structure of the precursor and tissue distribution of the mRNA.
A;Reference number: A35094; MUID:90192795; PMID:2315322
A;Accession: A35094
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-134 <KOP2>
A;Cross-references: GB:M31495; NID:g206887; PIDN:AAA42126.1; PID:g206888
R;Gossen, D.; Vandermeers, A.; Vandermeers-Piret, M.C.; Rathe, J.; Cauvin, A.; Robberecht, P.; Christophe, J.
Biochem. Biophys. Res. Commun. 160, 862-867, 1989
A;Title: Isolation and primary structure of rat secretin.
A;Reference number: A32544; MUID:89246545; PMID:2719704
A;Accession: A32544
A;Status: preliminary
A;Molecule type: protein
A;Residues: 33-59 <GOS>
C;Superfamily: glucagon
C;Keywords: duplication

  Query Match 90.2%; Score 119; DB 2; Length 134;
  Best Local Similarity 88.9%; Pred. No. 7.5e-11;
  Matches 24; Conservative 2; Mismatches 1; Indels 0; Gaps 0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||:: ||||||||||
Db         33 HSDGTFTSELSRLQDSARLQRLLQGLV 59
```

RESULT 7
B57082
secretin - guinea pig
C;Species: Cavia porcellus (guinea pig)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C;Accession: B57082
R;Buscail, L.; Cauvin, A.; Gourlet, P.; Gossen, D.; de Neef, P.; Rathe, J.; Robberecht, P.; Vandermeers-Piret, M.C.; Vandermeers, A.; Christophe, J.
Biochim. Biophys. Acta 1038, 355-359, 1990
A;Title: Purification and amino acid sequence of vasoactive intestinal peptide, peptide histidine isoleucinamide (1-27) and secretin from the small intestine of guinea pig.
A;Reference number: S09688; MUID:90254163; PMID:2340294
A;Accession: B57082
A;Molecule type: protein

A;Residues: 1-26 <BUS>
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duodenal mucosa; duplication; hormone;
secretagogue
F;1-26/Product: secretin #status experimental <MAT>
F;26/Modified site: amidated carboxyl end (Val) #status experimental

  Query Match   87.1%; Score 115; DB 1; Length 26;
  Best Local Similarity 92.3%; Pred. No. 5e-11;
  Matches   24; Conservative   1; Mismatches   1; Indels   0; Gaps   0;

Qy   2 SDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db   1 SDGTFTSELSRLRDSARLQRLLQGLV 26

RESULT 8
JC2202
secretin precursor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 30-Sep-1993 #sequence_revision 20-Aug-1994 #text_change 09-Jul-2004
C;Accession: JC2202; S34214
R;Lan, M.S.; Kajiyama, W.; Donadel, G.; Lu, J.; Notkins, A.L.
Biochem. Biophys. Res. Commun. 200, 1066-1071, 1994
A;Title: cDNA sequence and genomic organization of mouse secretin.
A;Reference number: JC2202; MUID:94234995; PMID:8179583
A;Accession: JC2202
A;Molecule type: mRNA
A;Residues: 1-133 <LAN>
A;Cross-references: UNIPROT:Q08535; EMBL:X73580; NID:g313710; PIDN:CAA51982.1;
PID:g313711
C;Comment: This protein regulates the secretion of pancreatic juices and
stimulates insulin secretion.
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; secretagogue
F;1-27/Domain: signal sequence #status predicted <SIG>
F;28-133/Product: prosecretin #status predicted <PRO>
F;32-58/Product: secretin #status predicted <MAT>
F;58/Modified site: amidated carboxyl end (Val) (amide in mature form from
following glycine) #status predicted

  Query Match   85.6%; Score 113; DB 2; Length 133;
  Best Local Similarity 85.2%; Pred. No. 6.2e-10;
  Matches   23; Conservative   2; Mismatches   2; Indels   0; Gaps   0;

Qy   1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||| |||||||:: ||||||||||
Db   32 HSDGMFTSELSRLQDSARLQRLLQGLV 58

RESULT 9
C60415
secretin - rabbit
C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 03-Feb-1993 #sequence_revision 03-Feb-1993 #text_change 09-Jul-2004
C;Accession: C60415

R;Gossen, D.; Buscail, L.; Cauvin, A.; Gourlet, P.; De Neef, P.; Rathe, J.;
Robberecht, P.; Vandermeers-Piret, M.C.; Vandermeers, A.; Christophe, J.
Peptides 11, 123-128, 1990
A;Title: Amino acid sequence of VIP, PHI and secretin from the rabbit small
intestine.
A;Reference number: A60415; MUID:90259845; PMID:2342988
A;Accession: C60415
A;Molecule type: protein
A;Residues: 1-27 <GOS>
A;Cross-references: UNIPROT:P32647
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone; intestine; secretagogue
F;27/Modified site: amidated carboxyl end (Leu) #status experimental

  Query Match   84.8%; Score 112; DB 2; Length 27;
  Best Local Similarity   85.2%; Pred. No. 1.5e-10;
  Matches   23; Conservative   2; Mismatches   2; Indels   0; Gaps   0;

Qy   1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||| ||||||||: ||||||||||:
Db   1 HSDGTLTSELSRLRDRARLQRLLQGLL 27

RESULT 10
SECH
secretin - chicken
C;Species: Gallus gallus (chicken)
C;Date: 01-Sep-1981 #sequence_revision 01-Sep-1981 #text_change 09-Jul-2004
C;Accession: A01545
R;Nilsson, A.; Carlquist, M.; Jornvall, H.; Mutt, V.
Eur. J. Biochem. 112, 383-388, 1980
A;Title: Isolation and characterization of chicken secretin.
A;Reference number: A01545; MUID:81114197; PMID:7460928
A;Accession: A01545
A;Molecule type: protein
A;Residues: 1-27 <NIL>
A;Cross-references: UNIPROT:P01280
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; hormone
F;27/Modified site: amidated carboxyl end (Met) #status experimental

  Query Match   59.1%; Score 78; DB 1; Length 27;
  Best Local Similarity   51.9%; Pred. No. 2.4e-05;
  Matches   14; Conservative   7; Mismatches   6; Indels   0; Gaps   0;

Qy   1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||| |||| |::| |::|: :| |:
Db   1 HSDGLFTSEYSKMRGNAQVQKFIQNLM 27

RESULT 11
G83069
probable oxidoreductase PA4615 [imported] - Pseudomonas aeruginosa (strain PAO1)
C;Species: Pseudomonas aeruginosa
C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 09-Jul-2004
C;Accession: G83069

R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, M.J.; Brinkman, F.S.L.; Hufnagle, W.O.; Kowalik, D.J.; Lagrou, M.; Garber, R.L.; Goltry, L.; Tolentino, E.; Westbrook-Wadman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig, K.; Lim, R.M.; Smith, K.A.; Spencer, D.H.; Wong, G.K.S.; Wu, Z.; Paulsen, I.T.; Reizer, J.; Saier, M.H.; Hancock, R.E.W.; Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, an opportunistic pathogen.
A;Reference number: A82950; MUID:20437337; PMID:10984043
A;Accession: G83069
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-258 <STO>
A;Cross-references: UNIPROT:Q9HVH6; GB:AE004875; GB:AE004091; NID:g9950857; PIDN:AAG08003.1; GSPDB:GN00131; PASP:PA4615
A;Experimental source: strain PAO1
C;Genetics:
A;Gene: PA4615

Query Match 50.8%; Score 67; DB 2; Length 258;
Best Local Similarity 82.4%; Pred. No. 0.015;
Matches 14; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

```
Qy          3 DGTFTSELSRLREGARL 19
              || |||||||||||  :|
Db         78 DGEFTSELSRLREGDQL 94
```

RESULT 12
HWGHS
exendin-1 - Mexican beaded lizard
N;Alternate names: helodermin H38; helospectin I
N;Contains: helospectin II
C;Species: Heloderma horridum (Mexican beaded lizard)
C;Date: 04-Dec-1986 #sequence_revision 04-Dec-1986 #text_change 07-May-1999
C;Accession: A01555
R;Parker, D.S.; Raufman, J.P.; O'Donohue, T.L.; Bledsoe, M.; Yoshida, H.; Pisano, J.J.
J. Biol. Chem. 259, 11751-11755, 1984
A;Title: Amino acid sequences of helospectins, new members of the glucagon superfamily, found in Gila monster venom.
A;Reference number: A01555; MUID:85006896; PMID:6207171
A;Note: Heloderma suspectum (Gila monster)
A;Accession: A01555
A;Molecule type: protein
A;Residues: 1-38 <PAR>
R;Vandermeers, A.; Gourlet, P.; Vandermeers-Piret, M.C.; Cauvin, A.; De Neef, P.; Rathe, J.; Svoboda, M.; Robberecht, P.; Christophe, J.
Eur. J. Biochem. 164, 321-327, 1987
A;Title: Chemical, immunological and biological properties of peptides like vasoactive-intestinal-peptide and peptide-histidine-isoleucinamide extracted from the venom of two lizards (Heloderma horridum and Heloderma suspectum).
A;Reference number: A37584; MUID:87190398; PMID:3569266
A;Contents: annotation
A;Note: reanalysis of peptide components in the venoms of Heloderma horridum and H. suspectum indicated that exendin-1 and its 37-residue variant are the major

components of H. horridum venom, whereas exendin-2 is the major peptide from H. suspectum venom (very small amounts of exendin-1 may be present); it is suggested that the source of the venom used by Parker et al. (reference number A01555) may have been misidentified
C;Comment: Exendins are venom components that are thought to bind to receptors for vasoactive intestinal peptide and/or secretin on pancreatic acinar cells and to activate adenylate cyclase, resulting in secretion of amylase.
C;Superfamily: glucagon
C;Keywords: duplication; secretagogue; venom
F;1-38/Product: exendin-1 (helospectin I) #status experimental <HS1>
F;1-37/Product: helospectin II #status experimental <HS2>

  Query Match 46.2%; Score 61; DB 1; Length 38;
  Best Local Similarity 44.4%; Pred. No. 0.014;
  Matches 12; Conservative 6; Mismatches 9; Indels 0; Gaps 0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||| |||:| |:|     ||: |: ::
Db          1 HSDATFTAEYSKLLAKLALQKYLESIL 27
```

RESULT 13
GCGP
glucagon precursor - guinea pig
N;Alternate names: oxyntomodulin
N;Contains: glicentin-related peptide; glucagon; glucagon-37 (oxyntomodulin); glucagon-like peptide 1; glucagon-like peptide 2
C;Species: Cavia porcellus (guinea pig)
C;Date: 30-Sep-1987 #sequence_revision 31-Dec-1992 #text_change 09-Jul-2004
C;Accession: A24856; A23849; A60323
R;Seino, S.; Welsh, M.; Bell, G.I.; Chan, S.J.; Steiner, D.F.
FEBS Lett. 203, 25-30, 1986
A;Title: Mutations in the guinea pig preproglucagon gene are restricted to a specific portion of the prohormone sequence.
A;Reference number: A24856; MUID:86248118; PMID:3755107
A;Accession: A24856
A;Molecule type: mRNA
A;Residues: 1-180 <SEI>
A;Cross-references: UNIPROT:P05110; DDBJ:D00014; GB:N00014; NID:g220288; PIDN:BAA00010.1; PID:g220289
R;Huang, C.G.; Eng, J.; Pan, Y.C.E.; Hulmes, J.D.; Yalow, R.S.
Diabetes 35, 508-512, 1986
A;Title: Guinea pig glucagon differs from other mammalian glucagons.
A;Reference number: A23849; MUID:86165412; PMID:3956884
A;Accession: A23849
A;Molecule type: protein
A;Residues: 53-81 <HUA>
R;Conlon, J.M.; Hansen, H.F.; Schwartz, T.W.
Regul. Pept. 11, 309-320, 1985
A;Title: Primary structure of glucagon and a partial sequence of oxyntomodulin (glucagon-37) from the guinea pig.
A;Reference number: A60323; MUID:86017849; PMID:4048553
A;Accession: A60323
A;Molecule type: protein
A;Residues: 53-81 <CON>
A;Note: glucagon-37 was not completely sequenced
C;Superfamily: glucagon

C;Keywords: amidated carboxyl end; carbohydrate metabolism; duplication;
hormone; pancreas
F;1-20/Domain: signal sequence #status predicted <SIG>
F;21-180/Product: proglucagon #status predicted <PGC>
F;21-50/Region: glicentin-related peptide #status predicted
F;53-89/Product: glucagon-37 (oxyntomodulin) #status experimental <G37>
F;53-81/Product: glucagon #status experimental <GCN>
F;98-127/Product: glucagon-like peptide 1 #status predicted <GL1>
F;146-178/Product: glucagon-like peptide 2 #status predicted <GL2>
F;127/Modified site: amidated carboxyl end (Arg) (amide in mature form from
following glycine) #status predicted

  Query Match   46.2%; Score 61; DB 1; Length 180;
  Best Local Similarity   44.4%; Pred. No. 0.082;
  Matches   12; Conservative   6; Mismatches   9; Indels   0; Gaps   0;

Qy   1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              || ||||| |: : | |: |: |:
Db   53 HSQGTFTSDYSKYLDSRRAQQFLKWLL 79

RESULT 14
HWGH3Z
exendin-3 - Mexican beaded lizard
C;Species: Heloderma horridum (Mexican beaded lizard)
C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 09-Jul-2004
C;Accession: A23674
R;Eng, J.; Andrews, P.C.; Kleinman, W.A.; Singh, L.; Raufman, J.P.
J. Biol. Chem. 265, 20259-20262, 1990
A;Title: Purification and structure of exendin-3, a new pancreatic secretagogue
isolated from Heloderma horridum venom.
A;Reference number: A23674; MUID:91056067; PMID:1700785
A;Accession: A23674
A;Molecule type: protein
A;Residues: 1-39 <ENG>
A;Cross-references: UNIPROT:P20394
C;Comment: Exendins are venom components that are thought to bind to receptors
for vasoactive intestinal peptide and/or secretin on pancreatic acinar cells and
to activate adenylate cyclase, resulting in secretion of amylase.
C;Superfamily: glucagon
C;Keywords: amidated carboxyl end; duplication; secretagogue; venom
F;39/Modified site: amidated carboxyl end (Ser) #status experimental

  Query Match   45.5%; Score 60; DB 1; Length 39;
  Best Local Similarity   46.2%; Pred. No. 0.021;
  Matches   12; Conservative   6; Mismatches   8; Indels   0; Gaps   0;

Qy   1 HSDGTFTSELSRLREGARLQRLLQGL 26
              |||||||:||: | :: :: |
Db   1 HSDGTFTSDLSKQMEEEAVRLFIEWL 26

RESULT 15
GCOPV
glucagon - North American opossum
C;Species: Didelphis virginiana, Didelphis marsupialis virginiana (North
American opossum)

C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 09-Jul-2004
C;Accession: JQ0364
R;Yu, J.H.; Eng, J.; Rattan, S.; Yalow, R.S.
Peptides 10, 1195-1197, 1989
A;Title: Opossum insulin, glucagon and pancreatic polypeptide: amino acid sequences.
A;Reference number: JQ0362; MUID:90160042; PMID:2695899
A;Accession: JQ0364
A;Molecule type: protein
A;Residues: 1-29 <YUJ>
A;Cross-references: UNIPROT:P18108
C;Superfamily: glucagon
C;Keywords: carbohydrate metabolism; duplication; hormone; pancreas

Query Match 44.7%; Score 59; DB 1; Length 29;
Best Local Similarity 44.4%; Pred. No. 0.022;
Matches 12; Conservative 5; Mismatches 10; Indels 0; Gaps 0;

```
Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              || ||||| |:  :  | |  :| |:
Db          1 HSQGTFTSDYSKYLDSRRAQDFVQWLM 27
```

Search completed: March 16, 2005, 12:46:55
Job time : 19.3333 secs

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OM protein - protein search, using sw model

Run on: March 16, 2005, 12:46:04 ; Search time 76.6667 Seconds
(without alignments)
116.408 Million cell updates/sec

Title: US-10-822-677-10
Perfect score: 132
Sequence: 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1401741 seqs, 330541175 residues

Total number of hits satisfying chosen parameters: 1401741

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA:*
1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
4: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
5: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
6: /cgn2_6/ptodata/2/pubpaa/PCTUS_PUBCOMB.pep:*
7: /cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
8: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
9: /cgn2_6/ptodata/2/pubpaa/US09A_PUBCOMB.pep:*
10: /cgn2_6/ptodata/2/pubpaa/US09B_PUBCOMB.pep:*
11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep:*
12: /cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
14: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
15: /cgn2_6/ptodata/2/pubpaa/US10C_PUBCOMB.pep:*
16: /cgn2_6/ptodata/2/pubpaa/US10D_PUBCOMB.pep:*
17: /cgn2_6/ptodata/2/pubpaa/US10_NEW_PUB.pep:*
18: /cgn2_6/ptodata/2/pubpaa/US11_NEW_PUB.pep:*
19: /cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*
20: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	132	100.0	27	9	US-09-897-412-10	Sequence 10, Appl
2	132	100.0	27	14	US-10-197-954-123	Sequence 123, App
3	132	100.0	27	15	US-10-343-654-21	Sequence 21, Appl
4	132	100.0	27	16	US-10-822-677-10	Sequence 10, Appl
5	132	100.0	27	17	US-10-760-085-123	Sequence 123, App
6	132	100.0	121	15	US-10-416-314-6	Sequence 6, Appli
7	126	95.5	27	9	US-09-897-412-12	Sequence 12, Appl
8	126	95.5	27	16	US-10-822-677-12	Sequence 12, Appl
9	123	93.2	27	9	US-09-897-412-11	Sequence 11, Appl
10	123	93.2	27	9	US-09-999-745-52	Sequence 52, Appl
11	123	93.2	27	9	US-09-554-000-36	Sequence 36, Appl
12	123	93.2	27	14	US-10-004-530A-19	Sequence 19, Appl
13	123	93.2	27	15	US-10-398-458-16	Sequence 16, Appl
14	123	93.2	27	16	US-10-822-677-11	Sequence 11, Appl
15	123	93.2	27	17	US-10-788-563-19	Sequence 19, Appl
16	112	84.8	27	15	US-10-360-101-96	Sequence 96, Appl
17	65	49.2	29	10	US-09-847-249A-10	Sequence 10, Appl
18	64	48.5	29	10	US-09-847-249A-30	Sequence 30, Appl
19	64	48.5	29	10	US-09-847-249A-38	Sequence 38, Appl
20	64	48.5	29	10	US-09-847-249A-73	Sequence 73, Appl
21	64	48.5	29	10	US-09-847-249A-74	Sequence 74, Appl
22	64	48.5	29	10	US-09-847-249A-75	Sequence 75, Appl
23	64	48.5	29	10	US-09-847-249A-76	Sequence 76, Appl
24	63	47.7	29	10	US-09-847-249A-25	Sequence 25, Appl
25	63	47.7	29	10	US-09-847-249A-28	Sequence 28, Appl
26	63	47.7	29	10	US-09-847-249A-34	Sequence 34, Appl
27	63	47.7	29	10	US-09-847-249A-44	Sequence 44, Appl
28	62	47.0	29	10	US-09-847-249A-9	Sequence 9, Appli
29	62	47.0	29	10	US-09-847-249A-11	Sequence 11, Appl
30	62	47.0	30	14	US-10-265-345A-4	Sequence 4, Appli
31	62	47.0	30	15	US-10-345-751-4	Sequence 4, Appli
32	62	47.0	31	9	US-09-209-799D-26	Sequence 26, Appl
33	62	47.0	31	10	US-09-997-792-26	Sequence 26, Appl
34	62	47.0	31	16	US-10-716-326-30	Sequence 30, Appl
35	61	46.2	29	10	US-09-847-249A-32	Sequence 32, Appl
36	61	46.2	29	10	US-09-847-249A-40	Sequence 40, Appl
37	61	46.2	29	10	US-09-847-249A-66	Sequence 66, Appl
38	61	46.2	29	10	US-09-847-249A-67	Sequence 67, Appl
39	61	46.2	29	10	US-09-847-249A-70	Sequence 70, Appl
40	61	46.2	29	15	US-10-151-683-1	Sequence 1, Appli
41	61	46.2	37	9	US-09-851-738-11	Sequence 11, Appl
42	61	46.2	37	9	US-09-858-880-11	Sequence 11, Appl
43	61	46.2	37	9	US-09-805-507-11	Sequence 11, Appl
44	61	46.2	37	9	US-09-859-804-11	Sequence 11, Appl
45	61	46.2	37	9	US-09-982-978-11	Sequence 11, Appl

ALIGNMENTS

RESULT 1
US-09-897-412-10
; Sequence 10, Application US/09897412
; Patent No. US20020142956A1

; GENERAL INFORMATION:
; APPLICANT: Davis, Richard J
; APPLICANT: Page, Keith J
; TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
; TITLE OF INVENTION: Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
; TITLE OF INVENTION: (COPD)
; FILE REFERENCE: 620-148
; CURRENT APPLICATION NUMBER: US/09/897,412
; CURRENT FILING DATE: 2001-07-03
; PRIOR APPLICATION NUMBER: GB 0016441.8
; PRIOR FILING DATE: 2000-07-04
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-897-412-10

Query Match 100.0%; Score 132; DB 9; Length 27;
Best Local Similarity 100.0%; Pred. No. 4.2e-12;
Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
||||||||||||||||||||||||||||
Db 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

RESULT 2
US-10-197-954-123
; Sequence 123, Application US/10197954
; Publication No. US20030119021A1
; GENERAL INFORMATION:
; APPLICANT: K"ster, Hubert
; APPLICANT: Siddiqi, Suhaib
; APPLICANT: Little, Daniel
; TITLE OF INVENTION: Capture Compounds, Collections Thereof
; TITLE OF INVENTION: And Methods For Analyzing The Proteome And Complex
; TITLE OF INVENTION: Compositions
; FILE REFERENCE: 24743-2305
; CURRENT APPLICATION NUMBER: US/10/197,954
; CURRENT FILING DATE: 2002-07-16
; PRIOR APPLICATION NUMBER: 60/306,019
; PRIOR FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/314,123
; PRIOR FILING DATE: 2001-08-21
; PRIOR APPLICATION NUMBER: 60/363,433
; PRIOR FILING DATE: 2002-03-11
; NUMBER OF SEQ ID NOS: 149
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 123
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-197-954-123

Query Match 100.0%; Score 132; DB 14; Length 27;

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  Best Local Similarity   100.0%;  Pred. No. 4.2e-12;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27


RESULT 3
US-10-343-654-21
; Sequence 21, Application US/10343654
; Publication No. US20030204063A1
; GENERAL INFORMATION:
;  APPLICANT: Denis Gravel (Inventor)
;  APPLICANT:  Abdelkrim Habi (Inventor)
;  APPLICANT:  Thierry Abribat (Inventor)
;  APPLICANT:  Theratechnologies Inc. (Assignee)
;  TITLE OF INVENTION: Modified Biological Peptides with
;  TITLE OF INVENTION:  Increased Potency
;  FILE REFERENCE: 12411-22PCT
;  CURRENT APPLICATION NUMBER: US/10/343,654
;  CURRENT FILING DATE:  2003-02-03
;  NUMBER OF SEQ ID NOS: 50
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 21
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: human
;   FEATURE:
;   NAME/KEY: AMIDATION
;   LOCATION: (27)...(27)
US-10-343-654-21

  Query Match             100.0%;  Score 132;  DB 15;  Length 27;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-12;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27


RESULT 4
US-10-822-677-10
; Sequence 10, Application US/10822677
; Publication No. US20040191238A1
; GENERAL INFORMATION:
;  APPLICANT: Davis, Richard J
;  APPLICANT:  Page, Keith J
;  TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
;  TITLE OF INVENTION:  Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
;  TITLE OF INVENTION:  (COPD)
;  FILE REFERENCE: 620-148
;  CURRENT APPLICATION NUMBER: US/10/822,677
;  CURRENT FILING DATE:  2004-04-13
;  PRIOR APPLICATION NUMBER: US/09/897,412
;  PRIOR FILING DATE: 2001-07-03
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;  PRIOR APPLICATION NUMBER: GB 0016441.8
;  PRIOR FILING DATE: 2000-07-04
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-822-677-10

  Query Match             100.0%;  Score 132;  DB 16;  Length 27;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-12;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27


RESULT 5
US-10-760-085-123
; Sequence 123, Application US/10760085
; Publication No. US20050042771A1
; GENERAL INFORMATION:
;  APPLICANT: Hubert K"ster
;  APPLICANT:  Daniel Paul Little
;  APPLICANT:  Suhaib Mahmood Siddiqi
;  APPLICANT:  Mattew Peter Grealish
;  APPLICANT:  Subramaniam Marappan
;  APPLICANT:  Chester Frederick Hassman III
;  APPLICANT:  Ping Yip
;  TITLE OF INVENTION: Capture Compounds, Collections Thereof
;  TITLE OF INVENTION:  And Methods For Analyzing The Proteome And Complex
;  TITLE OF INVENTION:  Compositions
;  FILE REFERENCE: 24743-2309
;  CURRENT APPLICATION NUMBER: US/10/760,085
;  CURRENT FILING DATE:  2004-01-16
;  PRIOR APPLICATION NUMBER: 60/441,398
;  PRIOR FILING DATE: 2003-01-16
;  NUMBER OF SEQ ID NOS: 149
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 123
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Homo Sapien
US-10-760-085-123

  Query Match             100.0%;  Score 132;  DB 17;  Length 27;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-12;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db          1 HSDGTFTSELSRLREGARLQRLLQGLV 27


RESULT 6
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US-10-416-314-6
; Sequence 6, Application US/10416314
; Publication No. US20040082508A1
; GENERAL INFORMATION:
; APPLICANT: YUE, Henry
; APPLICANT: YAO, Monique G.
; APPLICANT: GANDHI, Ameena R.
; APPLICANT: BAUGHN, Mariah R.
; APPLICANT: SWARNAKAR, Anita
; APPLICANT: CHAWLA, Narinder K.
; APPLICANT: SANJANWALA, Madhusudan M.
; APPLICANT: THORNTON, Michael B.
; APPLICANT: ELLIOTT, Vicki S.
; APPLICANT: LU, Yan
; APPLICANT: GIETZEN, Kimberly J.
; APPLICANT: BURFORD, Neil
; APPLICANT: DING, Li
; APPLICANT: HAFALIA, April J.A.
; APPLICANT: TANG, Y. Tom
; APPLICANT: BANDMAN, Olga
; APPLICANT: WARREN, Bridget A.
; APPLICANT: HONCHELL, Cynthia D.
; APPLICANT: LU, Dyung Aina M.
; APPLICANT: THANGAVELU, Kavitha
; APPLICANT: LEE, Sally
; APPLICANT: XU, Yuming
; APPLICANT: YANG, Junming
; APPLICANT: LAL, Preeti G.
; APPLICANT: TRAN, Bao
; APPLICANT: ISON, Craig H.
; APPLICANT: DUGGAN, Brendan M.
; APPLICANT: KAREHT, Stephanie K.
; TITLE OF INVENTION: SECRETED PROTEINS
; FILE REFERENCE: PI-0287 USN
; CURRENT APPLICATION NUMBER: US/10/416,314
; CURRENT FILING DATE: 2003-05-08
; PRIOR APPLICATION NUMBER: US 60/247,505
; PRIOR FILING DATE: 2000-11-08
; PRIOR APPLICATION NUMBER: US 60/249,642
; PRIOR FILING DATE: 2000-11-09
; PRIOR APPLICATION NUMBER: US 60/249,824
; PRIOR FILING DATE: 2000-11-16
; PRIOR APPLICATION NUMBER: US 60/252,824
; PRIOR FILING DATE: 2000-11-21
; PRIOR APPLICATION NUMBER: US 60/254,305
; PRIOR FILING DATE: 2000-12-08
; PRIOR APPLICATION NUMBER: US 60/256,448
; PRIOR FILING DATE: 2000-12-18
; NUMBER OF SEQ ID NOS: 130
; SOFTWARE: PERL Program
; SEQ ID NO 6
; LENGTH: 121
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; OTHER INFORMATION: Incyte ID No: 1799943CD1

US-10-416-314-6

  Query Match 100.0%; Score 132; DB 15; Length 121;
  Best Local Similarity 100.0%; Pred. No. 2.2e-11;
  Matches 27; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
      ||||||||||||||||||||||||||||
Db 28 HSDGTFTSELSRLREGARLQRLLQGLV 54

RESULT 7
US-09-897-412-12
; Sequence 12, Application US/09897412
; Patent No. US20020142956A1
; GENERAL INFORMATION:
; APPLICANT: Davis, Richard J
; APPLICANT: Page, Keith J
; TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
; TITLE OF INVENTION: Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
; TITLE OF INVENTION: (COPD)
; FILE REFERENCE: 620-148
; CURRENT APPLICATION NUMBER: US/09/897,412
; CURRENT FILING DATE: 2001-07-03
; PRIOR APPLICATION NUMBER: GB 0016441.8
; PRIOR FILING DATE: 2000-07-04
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Canis sp.
US-09-897-412-12

  Query Match 95.5%; Score 126; DB 9; Length 27;
  Best Local Similarity 96.3%; Pred. No. 3.1e-11;
  Matches 26; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 HSDGTFTSELSRLREGARLQRLLQGLV 27
      |||||||||||||| ||||||||||
Db 1 HSDGTFTSELSRLRESARLQRLLQGLV 27

RESULT 8
US-10-822-677-12
; Sequence 12, Application US/10822677
; Publication No. US20040191238A1
; GENERAL INFORMATION:
; APPLICANT: Davis, Richard J
; APPLICANT: Page, Keith J
; TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
; TITLE OF INVENTION: Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
; TITLE OF INVENTION: (COPD)
; FILE REFERENCE: 620-148
; CURRENT APPLICATION NUMBER: US/10/822,677
; CURRENT FILING DATE: 2004-04-13
; PRIOR APPLICATION NUMBER: US/09/897,412

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;  PRIOR FILING DATE: 2001-07-03
;  PRIOR APPLICATION NUMBER: GB 0016441.8
;  PRIOR FILING DATE: 2000-07-04
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Canis sp.
US-10-822-677-12

  Query Match             95.5%;  Score 126;  DB 16;  Length 27;
  Best Local Similarity   96.3%;  Pred. No. 3.1e-11;
  Matches   26;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||  ||||||||||
Db          1 HSDGTFTSELSRLRESARLQRLLQGLV 27


RESULT 9
US-09-897-412-11
; Sequence 11, Application US/09897412
; Patent No. US20020142956A1
; GENERAL INFORMATION:
;  APPLICANT: Davis, Richard J
;  APPLICANT:  Page, Keith J
;  TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
;  TITLE OF INVENTION:  Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
;  TITLE OF INVENTION:  (COPD)
;  FILE REFERENCE: 620-148
;  CURRENT APPLICATION NUMBER: US/09/897,412
;  CURRENT FILING DATE:  2001-07-03
;  PRIOR APPLICATION NUMBER: GB 0016441.8
;  PRIOR FILING DATE: 2000-07-04
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Sus sp.
US-09-897-412-11

  Query Match             93.2%;  Score 123;  DB 9;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 8.6e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||| ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 10
US-09-999-745-52
; Sequence 52, Application US/09999745
; Patent No. US20020157120A1
; GENERAL INFORMATION:
```

```
;  APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
;  APPLICANT:  Tsien, Roger Y.
;  APPLICANT:  Baird, Geoffrey
;  TITLE OF INVENTION: CIRCULARLY PERMUTED FLUORESCENT PROTEIN INDICATORS
;  FILE REFERENCE: REGEN1470-1
;  CURRENT APPLICATION NUMBER: US/09/999,745
;  CURRENT FILING DATE:  2001-10-23
;  PRIOR APPLICATION NUMBER: 09/316,920
;  PRIOR FILING DATE: 1999-05-21
;  NUMBER OF SEQ ID NOS: 67
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 52
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Sus scrofa
US-09-999-745-52

  Query Match             93.2%;  Score 123;  DB 9;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 8.6e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 11
US-09-554-000-36
; Sequence 36, Application US/09554000
; Patent No. US20020165364A1
; GENERAL INFORMATION:
;  APPLICANT: Tsien, Roger Y.
;  APPLICANT:  Miyawaki, Atsushi
;  TITLE OF INVENTION: FLUORESCENT PROTEIN SENSORS FOR
;  TITLE OF INVENTION:  DETECTION OF ANALYTES
;  FILE REFERENCE: 07257/042001
;  CURRENT APPLICATION NUMBER: US/09/554,000
;  CURRENT FILING DATE:  2000-04-20
;  PRIOR APPLICATION NUMBER: 08/818,252
;  PRIOR FILING DATE: 1997-03-14
;  NUMBER OF SEQ ID NOS: 56
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 36
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Sus scrofa
US-09-554-000-36

  Query Match             93.2%;  Score 123;  DB 9;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 8.6e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27
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RESULT 12
US-10-004-530A-19
; Sequence 19, Application US/10004530A
; Publication No. US20030050436A1
; GENERAL INFORMATION:
;  APPLICANT: Coy, David H.
;  APPLICANT:  Moreau, Jacques-Pierre
;  APPLICANT:  Kim, Sun H.
;  TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
;  FILE REFERENCE: 00537-00900K
;  CURRENT APPLICATION NUMBER: US/10/004,530A
;  CURRENT FILING DATE:  2002-08-09
;  PRIOR APPLICATION NUMBER: 09/260,846
;  PRIOR FILING DATE: 1999-03-02
;  PRIOR APPLICATION NUMBER: 08/337,127
;  PRIOR FILING DATE: 1994-11-10
;  PRIOR APPLICATION NUMBER: 07/779,039
;  PRIOR FILING DATE: 1991-10-18
;  PRIOR APPLICATION NUMBER: 07/502,438
;  PRIOR FILING DATE: 1990-03-30
;  PRIOR APPLICATION NUMBER: 07/397,169
;  PRIOR FILING DATE: 1989-08-21
;  PRIOR APPLICATION NUMBER: 07/376,555
;  PRIOR FILING DATE: 1989-07-07
;  PRIOR APPLICATION NUMBER: 07/317,941
;  PRIOR FILING DATE: 1989-03-02
;  PRIOR APPLICATION NUMBER: 07/282,328
;  PRIOR FILING DATE: 1988-12-09
;  PRIOR APPLICATION NUMBER: 07/257,998
;  PRIOR FILING DATE: 1988-10-14
;  PRIOR APPLICATION NUMBER: 07/248,771
;  PRIOR FILING DATE: 1988-09-23
;  Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 26
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 19
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-004-530A-19

  Query Match             93.2%;  Score 123;  DB 14;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 8.6e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 13
US-10-398-458-16
; Sequence 16, Application US/10398458
; Publication No. US20040024184A1
; GENERAL INFORMATION:
;  APPLICANT: Kossida, Sophia
;  TITLE OF INVENTION: Regulation of Human Secretin
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;  TITLE OF INVENTION:  Receptor-Like GPCR
;  FILE REFERENCE: 004974.00987
;  CURRENT APPLICATION NUMBER: US/10/398,458
;  CURRENT FILING DATE:  2003-04-04
;  PRIOR APPLICATION NUMBER: PCT/EP01/11439
;  PRIOR FILING DATE: 2001-10-04
;  PRIOR APPLICATION NUMBER: US 60/238,126
;  PRIOR FILING DATE: 2000-10-06
;  NUMBER OF SEQ ID NOS: 16
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 16
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-398-458-16

  Query Match             93.2%;  Score 123;  DB 15;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 8.6e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 14
US-10-822-677-11
; Sequence 11, Application US/10822677
; Publication No. US20040191238A1
; GENERAL INFORMATION:
;  APPLICANT: Davis, Richard J
;  APPLICANT:  Page, Keith J
;  TITLE OF INVENTION: Use of Secretin-Receptor Ligands in Treatment of Cystic
;  TITLE OF INVENTION:  Fibrosis (CF) and Chronic Obstructive Pulmonary Disease
;  TITLE OF INVENTION:  (COPD)
;  FILE REFERENCE: 620-148
;  CURRENT APPLICATION NUMBER: US/10/822,677
;  CURRENT FILING DATE:  2004-04-13
;  PRIOR APPLICATION NUMBER: US/09/897,412
;  PRIOR FILING DATE: 2001-07-03
;  PRIOR APPLICATION NUMBER: GB 0016441.8
;  PRIOR FILING DATE: 2000-07-04
;  NUMBER OF SEQ ID NOS: 13
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
;   LENGTH: 27
;   TYPE: PRT
;   ORGANISM: Sus sp.
US-10-822-677-11

  Query Match             93.2%;  Score 123;  DB 16;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 8.6e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27
```

RESULT 15
US-10-788-563-19
; Sequence 19, Application US/10788563
; Publication No. US20050026827A1
; GENERAL INFORMATION:
; APPLICANT: Coy, David H.
; APPLICANT: Moreau, Jacques-Pierre
; APPLICANT: Kim, Sun H.
; TITLE OF INVENTION: OCTAPEPTIDE BOMBESIN ANALOGS
; FILE REFERENCE: 00537-00900K
; CURRENT APPLICATION NUMBER: US/10/788,563
; CURRENT FILING DATE: 2004-02-27
; PRIOR APPLICATION NUMBER: US/10/004,530
; PRIOR FILING DATE: 2001-10-23
; PRIOR APPLICATION NUMBER: 09/260,846
; PRIOR FILING DATE: 1999-03-02
; PRIOR APPLICATION NUMBER: 08/337,127
; PRIOR FILING DATE: 1994-11-10
; PRIOR APPLICATION NUMBER: 07/779,039
; PRIOR FILING DATE: 1991-10-18
; PRIOR APPLICATION NUMBER: 07/502,438
; PRIOR FILING DATE: 1990-03-30
; PRIOR APPLICATION NUMBER: 07/397,169
; PRIOR FILING DATE: 1989-08-21
; PRIOR APPLICATION NUMBER: 07/376,555
; PRIOR FILING DATE: 1989-07-07
; PRIOR APPLICATION NUMBER: 07/317,941
; PRIOR FILING DATE: 1989-03-02
; PRIOR APPLICATION NUMBER: 07/282,328
; PRIOR FILING DATE: 1988-12-09
; PRIOR APPLICATION NUMBER: 07/257,998
; PRIOR FILING DATE: 1988-10-14
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 26
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 19
; LENGTH: 27
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-788-563-19

Query Match 93.2%; Score 123; DB 17; Length 27;
Best Local Similarity 92.6%; Pred. No. 8.6e-11;
Matches 25; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

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Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27
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Search completed: March 16, 2005, 13:08:12
Job time : 77.6667 secs

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: March 16, 2005, 12:31:22 ; Search time 93 Seconds
(without alignments)
148.668 Million cell updates/sec

Title: US-10-822-677-10
Perfect score: 132
Sequence: 1 HSDGTFTSELSRLREGARLQRLLQGLV 27

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	132	100.0	121	1	SECR_HUMAN	P09683 homo sapien
2	126	95.5	27	1	SECR_CANFA	P09910 canis famil
3	123	93.2	27	1	SECR_BOVIN	P63296 bos taurus
4	123	93.2	27	1	SECR_CAVPO	P63297 cavia porce
5	123	93.2	27	1	SECR_SHEEP	P31299 ovis aries
6	123	93.2	131	1	SECR_PIG	P63298 sus scrofa
7	119	90.2	134	1	SECR_RAT	P11384 rattus norv
8	113	85.6	133	1	SECR_MOUSE	Q08535 mus musculu
9	113	85.6	139	2	Q80ZS9	Q80zs9 mus musculu
10	112	84.8	27	1	SECR_RABIT	P32647 oryctolagus
11	78	59.1	27	1	SECR_CHICK	P01280 gallus gall
12	67	50.8	258	2	Q9HVH6	Q9hvh6 pseudomonas
13	65	49.2	258	2	Q87WB1	Q87wb1 pseudomonas
14	61	46.2	38	1	EXE1_HELSU	P04203 heloderma s
15	61	46.2	180	1	GLUC_CAVPO	P05110 c glucagon

16	60	45.5	39	1	EXE3_HELHO	P20394	heloderma h
17	60	45.5	87	2	Q7SZU6	Q7szu6	heloderma h
18	60	45.5	124	2	Q6RYB1	Q6ryb1	agkistrodon
19	60	45.5	266	2	Q6DIZ4	Q6diz4	xenopus tro
20	59	44.7	29	1	GLUC_CAMDR	P68273	camelus dro
21	59	44.7	29	1	GLUC_DIDMA	P18108	didelphis m
22	59	44.7	29	1	GLUC_MELGA	P68260	meleagris g
23	59	44.7	29	1	GLUC_RABIT	P68274	oryctolagus
24	59	44.7	29	1	GLUC_SAISC	P68275	saimiri sci
25	59	44.7	103	1	GLUC_RANCA	P15438	rana catesb
26	59	44.7	176	1	GLUC_SHEEP	Q8mj25	o glucagon
27	59	44.7	180	1	GLUC_BOVIN	P01272	b glucagon
28	59	44.7	180	1	GLUC_CANFA	P29794	c glucagon
29	59	44.7	180	1	GLUC_HUMAN	P01275	h glucagon
30	59	44.7	180	1	GLUC_MESAU	P01273	m glucagon
31	59	44.7	180	1	GLUC_MOUSE	P55095	m glucagon
32	59	44.7	180	1	GLUC_PIG	P01274	s glucagon
33	59	44.7	180	1	GLUC_RAT	P06883	r glucagon
34	59	44.7	204	1	GLUC_HELSU	O12956	h glucagon
35	59	44.7	206	1	GLUC_CHICK	P68259	g glucagon
36	59	44.7	219	1	GLU2_XENLA	O42144	xenopus lae
37	59	44.7	220	2	Q8UWL9	Q8uwl9	hoplobatrac
38	59	44.7	266	1	GLU1_XENLA	O42143	xenopus lae
39	58	43.9	62	1	GLUC_SCYCA	P09687	scyliorhinu
40	57	43.2	29	1	GLUC_ANAPL	P01276	anas platyr
41	57	43.2	29	1	GLUC_TORMA	P09567	torpedo mar
42	57	43.2	72	1	VIP_PIG	P01284	sus scrofa
43	57	43.2	72	1	VIP_RABIT	P32649	oryctolagus
44	56	42.4	45	2	Q6PPF4	Q6ppf4	capra hircu
45	56	42.4	72	1	VIP_CAVPO	P04566	cavia porce

ALIGNMENTS

```
RESULT 1
SECR_HUMAN
ID   SECR_HUMAN     STANDARD;      PRT;   121 AA.
AC   P09683;
DT   01-MAR-1989 (Rel. 10, Created)
DT   16-OCT-2001 (Rel. 40, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Secretin precursor.
GN   Name=SCT;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=20515579; PubMed=11060443;
RA   Whitmore T.E., Holloway J.L., Lofton-Day C.E., Maurer M.F., Chen L.,
RA   Quinton T.J., Vincent J.B., Scherer S.W., Lok S.;
RT   "Human secretin (SCT): gene structure, chromosome location, and
RT   distribution of mRNA.";
RL   Cytogenet. Cell Genet. 90:47-52(2000).
RN   [2]
```

```
RP   SEQUENCE OF 28-54.
RA   Carlquist M., Joernvall H., Forssmann W.-G., Thulin L., Johansson C.,
RA   Mutt V.;
RT   "Human secretin is not identical to the porcine/bovine hormone.";
RL   IRCS Med. Sci. 13:217-218(1985).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF244355; AAG31443.1; -.
DR   Genew; HGNC:10607; SCT.
DR   MIM; 182099; -.
DR   GO; GO:0005179; F:hormone activity; NAS.
DR   GO; GO:0030157; P:pancreatic juice secretion; NAS.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Cleavage on pair of basic residues;
KW   Direct protein sequencing; Glucagon family; Hormone; Signal.
FT   SIGNAL        1     18       Potential.
FT   PROPEP       19     26
FT   PEPTIDE      28     54       Secretin.
FT   PROPEP       58    121
FT   MOD_RES      54     54       Valine amide (G-55 provides amide group).
SQ   SEQUENCE   121 AA;  13016 MW;  44BDB4EFC0E161CF CRC64;

  Query Match             100.0%;  Score 132;  DB 1;  Length 121;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-11;
  Matches   27;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||||||||||||||
Db         28 HSDGTFTSELSRLREGARLQRLLQGLV 54


RESULT 2
SECR_CANFA
ID   SECR_CANFA     STANDARD;      PRT;    27 AA.
AC   P09910;
DT   01-MAR-1989 (Rel. 10, Created)
DT   01-MAR-1989 (Rel. 10, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Secretin.
GN   Name=SCT;
OS   Canis familiaris (Dog).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
```

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OX   NCBI_TaxID=9615;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Intestine;
RX   MEDLINE=87314204; PubMed=3626755; DOI=10.1016/0024-3205(87)90202-5;
RA   Shinomura Y., Eng J., Yalow R.S.;
RT   "Dog secretin: sequence and biologic activity.";
RL   Life Sci. 41:1243-1248(1987).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
DR   PIR; A27267; A27267.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT   MOD_RES      27     27       Valine amide.
SQ   SEQUENCE   27 AA;  3070 MW;  2D4015814F955B78 CRC64;

  Query Match             95.5%;  Score 126;  DB 1;  Length 27;
  Best Local Similarity   96.3%;  Pred. No. 1.7e-11;
  Matches   26;  Conservative    0;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||| ||||||||||
Db          1 HSDGTFTSELSRLRESARLQRLLQGLV 27


RESULT 3
SECR_BOVIN
ID   SECR_BOVIN     STANDARD;      PRT;    27 AA.
AC   P63296; P01279; Q9TR13;
DT   21-JUL-1986 (Rel. 01, Created)
DT   25-OCT-2004 (Rel. 45, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Secretin.
GN   Name=SCT;
OS   Bos taurus (Bovine).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC   Bovinae; Bos.
OX   NCBI_TaxID=9913;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=81237102; PubMed=7250377; DOI=10.1016/0014-5793(81)80343-2;
RA   Carlquist M., Joernvall H., Mutt V.;
RT   "Isolation and amino acid sequence of bovine secretin.";
RL   FEBS Lett. 127:71-74(1981).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
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DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT   MOD_RES      27     27       Valine amide.
SQ   SEQUENCE   27 AA;  3056 MW;  2D4015814ED05B78 CRC64;

  Query Match             93.2%;  Score 123;  DB 1;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 4.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 4
SECR_CAVPO
ID   SECR_CAVPO     STANDARD;      PRT;    27 AA.
AC   P63297; P01279; Q9TR13;
DT   21-JUL-1986 (Rel. 01, Created)
DT   25-OCT-2004 (Rel. 45, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Secretin.
GN   Name=SCT;
OS   Cavia porcellus (Guinea pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OX   NCBI_TaxID=10141;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Small intestine;
RX   MEDLINE=90254163; PubMed=2340294; DOI=10.1016/0167-4838(90)90248-E;
RA   Buscail L., Cauvin A., Gourlet P., Gossen D., de Neef P., Rathe J.,
RA   Robberecht P., Vandermeers-Piret M.-C., Vandermeers A., Christophe J.;
RT   "Purification and amino acid sequence of vasoactive intestinal
RT   peptide, peptide histidine isoleucinamide (1-27) and secretin from the
RT   small intestine of guinea pig.";
RL   Biochim. Biophys. Acta 1038:355-359(1990).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT   MOD_RES      27     27       Valine amide.
SQ   SEQUENCE   27 AA;  3056 MW;  2D4015814ED05B78 CRC64;

  Query Match             93.2%;  Score 123;  DB 1;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 4.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27
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RESULT 5
SECR_SHEEP
ID   SECR_SHEEP     STANDARD;      PRT;    27 AA.
AC   P31299;
DT   01-JUL-1993 (Rel. 26, Created)
DT   01-JUL-1993 (Rel. 26, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Secretin.
GN   Name=SCT;
OS   Ovis aries (Sheep).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
OC   Caprinae; Ovis.
OX   NCBI_TaxID=9940;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Small intestine;
RX   MEDLINE=91239834; PubMed=2034821; DOI=10.1016/0167-0115(91)90044-H;
RA   Bounjoua Y., Vandermeers A., Robberecht P., Vandermeers-Piret M.C.,
RA   Christophe J.;
RT   "Purification and amino acid sequence of vasoactive intestinal
RT   peptide, peptide histidine isoleucinamide and secretin from the ovine
RT   small intestine.";
RL   Regul. Pept. 32:169-179(1991).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
DR   PIR; C60072; SESH.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT   MOD_RES      27     27       Valine amide.
SQ   SEQUENCE   27 AA;  3056 MW;  2D4015814ED05B78 CRC64;

  Query Match             93.2%;  Score 123;  DB 1;  Length 27;
  Best Local Similarity   92.6%;  Pred. No. 4.8e-11;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||||||||||||: ||||||||||
Db          1 HSDGTFTSELSRLRDSARLQRLLQGLV 27


RESULT 6
SECR_PIG
ID   SECR_PIG       STANDARD;      PRT;   131 AA.
AC   P63298; P01279; Q9TR13;
DT   21-JUL-1986 (Rel. 01, Created)
DT   01-APR-1990 (Rel. 14, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Secretin precursor (Fragment).
GN   Name=SCT;
OS   Sus scrofa (Pig).
```

```
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX   NCBI_TaxID=9823;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=90192795; PubMed=2315322;
RA   Kopin A.S., Wheeler M.B., Leiter A.B.;
RT   "Secretin: structure of the precursor and tissue distribution of the
RT   mRNA.";
RL   Proc. Natl. Acad. Sci. U.S.A. 87:2299-2303(1990).
RN   [2]
RP   SEQUENCE OF 1-56.
RC   TISSUE=Intestine;
RX   MEDLINE=96109189; PubMed=8618828;
RA   Bonetto V., Joernvall H., Mutt V., Sillard R.;
RT   "Two alternative processing pathways for a preprohormone: a bioactive
RT   form of secretin.";
RL   Proc. Natl. Acad. Sci. U.S.A. 92:11985-11989(1995).
RN   [3]
RP   SEQUENCE OF 30-56.
RX   MEDLINE=70282334; PubMed=5465996;
RA   Mutt V., Jorpes J.E., Magnusson S.;
RT   "Structure of porcine secretin. The amino acid sequence.";
RL   Eur. J. Biochem. 15:513-519(1970).
RN   [4]
RP   SEQUENCE OF 30-59 AND 92-131.
RX   MEDLINE=90370867; PubMed=2395872;
RA   Gafvelin G., Joernvall H., Mutt V.;
RT   "Processing of prosecretin: isolation of a secretin precursor from
RT   porcine intestine.";
RL   Proc. Natl. Acad. Sci. U.S.A. 87:6781-6785(1990).
RN   [5]
RP   SYNTHESIS OF 30-131.
RX   MEDLINE=67244720; PubMed=5978238;
RA   Bodanszky M., Ondetti M.A., Levine S.D., Narayanan V.L.,
RA   Von Saltza M., Sheehan J.T., Williams N.J., Sabo E.F.;
RT   "Synthesis of a heptacosapeptide amide with the hormonal activity of
RT   secretin.";
RL   Chem. Ind. 42:1757-1758(1966).
RN   [6]
RP   STRUCTURE BY NMR OF SECRETIN.
RX   MEDLINE=88151942; PubMed=2831051;
RA   Clore G.M., Nilges M., Bruenger A., Gronenborn A.M.;
RT   "Determination of the backbone conformation of secretin by restrained
RT   molecular dynamics on the basis of interproton distance data.";
RL   Eur. J. Biochem. 171:479-484(1988).
RN   [7]
RP   STRUCTURE BY NMR OF SECRETIN.
RX   MEDLINE=87191017; PubMed=2883029; DOI=10.1016/0014-5793(87)80119-9;
RA   Gronenborn A.M., Bovermann G., Clore G.M.;
RT   "A 1H-NMR study of the solution conformation of secretin. Resonance
RT   assignment and secondary structure.";
RL   FEBS Lett. 215:88-94(1987).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
```

```
CC   -!- PHARMACEUTICAL: Available under the name Secretin-Ferring (Ferring
CC       Pharmaceuticals).
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; M31496; AAA31121.1; -.
DR   PIR; B35094; SEPG.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Cleavage on pair of basic residues;
KW   Direct protein sequencing; Glucagon family; Hormone; Pharmaceutical;
KW   Signal.
FT   NON_TER       1      1
FT   SIGNAL       <1     18       By similarity.
FT   PROPEP        19     28
FT   PEPTIDE       30     56       Secretin.
FT   PROPEP        60    131
FT   MOD_RES       56     56       Valine amide (G-57 provides amide group).
SQ   SEQUENCE   131 AA;  14277 MW;  1A24BDDA600E4E34 CRC64;

  Query Match             93.2%;  Score 123;  DB 1;  Length 131;
  Best Local Similarity   92.6%;  Pred. No. 2.7e-10;
  Matches   25;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||||||||||||: ||||||||||
Db         30 HSDGTFTSELSRLRDSARLQRLLQGLV 56


RESULT 7
SECR_RAT
ID   SECR_RAT       STANDARD;      PRT;   134 AA.
AC   P11384;
DT   01-JUL-1989 (Rel. 11, Created)
DT   01-APR-1990 (Rel. 14, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Secretin precursor.
GN   Name=Sct;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=90192795; PubMed=2315322;
RA   Kopin A.S., Wheeler M.B., Leiter A.B.;
RT   "Secretin: structure of the precursor and tissue distribution of the
RT   mRNA.";
RL   Proc. Natl. Acad. Sci. U.S.A. 87:2299-2303(1990).
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RN   [2]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=91271384; PubMed=1711228;
RA   Kopin A.S., Wheeler M.B., Nishitani J., McBride E.W., Chang T.M.,
RA   Chey W.Y., Leiter A.B.;
RT   "The secretin gene: evolutionary history, alternative splicing, and
RT   developmental regulation.";
RL   Proc. Natl. Acad. Sci. U.S.A. 88:5335-5339(1991).
RN   [3]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RX   MEDLINE=91286291; PubMed=2061329;
RA   Itoh N., Furuya T., Ozaki K., Kawasaki T.;
RT   "The secretin precursor gene. Structure of the coding region and
RT   expression in the brain.";
RL   J. Biol. Chem. 266:12595-12598(1991).
RN   [4]
RP   SEQUENCE OF 33-59.
RX   MEDLINE=89246545; PubMed=2719704;
RA   Gossen D., Vandermeers A., Vandermeers-Piret M.-C., Rathe J.,
RA   Cauvin A., Robberecht P., Christophe J.;
RT   "Isolation and primary structure of rat secretin.";
RL   Biochem. Biophys. Res. Commun. 160:862-867(1989).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ----------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; M31495; AAA42126.1; -.
DR   EMBL; M64033; AAA42128.1; -.
DR   EMBL; M63984; AAA42127.1; -.
DR   PIR; A40886; A40959.
DR   RGD; 3643; Sct.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Cleavage on pair of basic residues;
KW   Direct protein sequencing; Glucagon family; Hormone; Signal.
FT   SIGNAL        1     21       Potential.
FT   PROPEP       22     31
FT   PEPTIDE      33     59       Secretin.
FT   PROPEP       63    134
FT   MOD_RES      59     59       Valine amide (G-60 provides amide group).
SQ   SEQUENCE   134 AA;  15072 MW;  D9FA1A4C1F7C86E6 CRC64;

  Query Match             90.2%;  Score 119;  DB 1;  Length 134;
  Best Local Similarity   88.9%;  Pred. No. 1.1e-09;
  Matches   24;  Conservative    2;  Mismatches    1;  Indels    0;  Gaps    0;
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Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||||||||||||:: ||||||||||
Db         33 HSDGTFTSELSRLQDSARLQRLLQGLV 59


RESULT 8
SECR_MOUSE
ID   SECR_MOUSE     STANDARD;      PRT;   133 AA.
AC   Q08535;
DT   01-OCT-1994 (Rel. 30, Created)
DT   01-OCT-1994 (Rel. 30, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Secretin precursor.
GN   Name=Sct;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=94234995; PubMed=8179583;
RA   Lan M.S., Kajiyama W., Donadel G., Lu J., Notkins A.L.;
RT   "cDNA sequence and genomic organization of mouse secretin.";
RL   Biochem. Biophys. Res. Commun. 200:1066-1071(1994).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ----------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; U07568; AAA18453.1; -.
DR   EMBL; X73580; CAA51982.1; -.
DR   PIR; JC2202; JC2202.
DR   MGD; MGI:99466; Sct.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Cleavage on pair of basic residues; Glucagon family;
KW   Hormone; Signal.
FT   SIGNAL       1     22       By similarity.
FT   PROPEP      23     30
FT   PEPTIDE     32     58       Secretin (By similarity).
FT   PROPEP      62    133
FT   MOD_RES     58     58       Valine amide (G-59 provides amide group).
SQ   SEQUENCE   133 AA;  14914 MW;  9B69CBCF74CA9709 CRC64;

  Query Match             85.6%;  Score 113;  DB 1;  Length 133;
  Best Local Similarity   85.2%;  Pred. No. 8.5e-09;
```

```
  Matches   23;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||| |||||||:: ||||||||||
Db         32 HSDGMFTSELSRLQDSARLQRLLQGLV 58


RESULT 9
Q80ZS9
ID   Q80ZS9      PRELIMINARY;      PRT;   139 AA.
AC   Q80ZS9;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Similar to secretin.
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Testis;
RA   Strausberg R.;
RL   Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; BC048484; AAH48484.1; -.
DR   GO; GO:0005576; C:extracellular; IEA.
DR   GO; GO:0005179; F:hormone activity; IEA.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
SQ   SEQUENCE   139 AA;  15569 MW;  B22F7C8642137E15 CRC64;
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  Query Match             85.6%;  Score 113;  DB 2;  Length 139;
  Best Local Similarity   85.2%;  Pred. No. 9e-09;
  Matches   23;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||| |||||||:: ||||||||||
Db         32 HSDGMFTSELSRLQDSARLQRLLQGLV 58


RESULT 10
SECR_RABIT
ID   SECR_RABIT     STANDARD;      PRT;    27 AA.
AC   P32647;
DT   01-OCT-1993 (Rel. 27, Created)
DT   01-OCT-1993 (Rel. 27, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Secretin.
GN   Name=SCT;
OS   Oryctolagus cuniculus (Rabbit).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX   NCBI_TaxID=9986;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Small intestine;
RX   MEDLINE=90259845; PubMed=2342988; DOI=10.1016/0196-9781(90)90120-T;
RA   Gossen D., Buscail L., Cauvin A., Gourlet P., de Neef P., Rathe J.,
RA   Robberecht P., Vandermeers-Piret M.C., Vandermeers A., Christophe J.;
RT   "Amino acid sequence of VIP, PHI and secretin from the rabbit small
RT   intestine.";
RL   Peptides 11:123-128(1990).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
DR   PIR; C60415; C60415.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT   MOD_RES      27     27       Leucine amide.
SQ   SEQUENCE   27 AA;  3105 MW;  38A015800BDD3618 CRC64;

  Query Match             84.8%;  Score 112;  DB 1;  Length 27;
  Best Local Similarity   85.2%;  Pred. No. 2.1e-09;
  Matches   23;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||||| |||||||: ||||||||||:
Db          1 HSDGTLTSELSRLRDRARLQRLLQGLL 27


RESULT 11
SECR_CHICK
ID   SECR_CHICK     STANDARD;      PRT;    27 AA.
AC   P01280;
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DT   21-JUL-1986 (Rel. 01, Created)
DT   21-JUL-1986 (Rel. 01, Last sequence update)
DT   25-OCT-2004 (Rel. 45, Last annotation update)
DE   Secretin.
GN   Name=SCT;
OS   Gallus gallus (Chicken).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC   Gallus.
OX   NCBI_TaxID=9031;
RN   [1]
RP   SEQUENCE.
RX   MEDLINE=81114197; PubMed=7460928;
RA   Nilsson A., Carlquist M., Joernvall H., Mutt V.;
RT   "Isolation and characterization of chicken secretin.";
RL   Eur. J. Biochem. 112:383-388(1980).
CC   -!- FUNCTION: Stimulates formation of NaHCO(3)-rich pancreatic juice
CC       and secretion of NaHCO(3)-rich bile and inhibits HCl production by
CC       the stomach.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the glucagon family.
DR   PIR; A01545; SECH.
DR   HSSP; P01275; 1BH0.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   PRINTS; PR00275; GLUCAGON.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Amidation; Direct protein sequencing; Glucagon family; Hormone.
FT   MOD_RES      27     27       Methionine amide.
SQ   SEQUENCE   27 AA;  3131 MW;  DA0AD71B6361BE7E CRC64;

  Query Match             59.1%;  Score 78;  DB 1;  Length 27;
  Best Local Similarity   51.9%;  Pred. No. 0.00025;
  Matches   14;  Conservative    7;  Mismatches    6;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              |||| |||| |::|  |::|: :| |:
Db          1 HSDGLFTSEYSKMRGNAQVQKFIQNLM 27


RESULT 12
Q9HVH6
ID   Q9HVH6      PRELIMINARY;      PRT;   258 AA.
AC   Q9HVH6;
DT   01-MAR-2001 (TrEMBLrel. 16, Created)
DT   01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Probable oxidoreductase.
GN   OrderedLocusNames=PA4615;
OS   Pseudomonas aeruginosa.
OC   Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
OC   Pseudomonadaceae; Pseudomonas.
OX   NCBI_TaxID=287;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=ATCC 15692 / PAO1;
RX   MEDLINE=20437337; PubMed=10984043; DOI=10.1038/35023079;
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RA   Stover C.K., Pham X.-Q.T., Erwin A.L., Mizoguchi S.D., Warrener P.,
RA   Hickey M.J., Brinkman F.S.L., Hufnagle W.O., Kowalik D.J., Lagrou M.,
RA   Garber R.L., Goltry L., Tolentino E., Westbrock-Wadman S., Yuan Y.,
RA   Brody L.L., Coulter S.N., Folger K.R., Kas A., Larbig K., Lim R.M.,
RA   Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,
RA   Reizer J., Saier M.H., Hancock R.E.W., Lory S., Olson M.V.;
RT   "Complete genome sequence of Pseudomonas aeruginosa PAO1, an
RT   opportunistic pathogen.";
RL   Nature 406:959-964(2000).
DR   EMBL; AE004875; AAG08003.1; -.
DR   PIR; G83069; G83069.
DR   HSSP; P28861; 1FDR.
DR   GO; GO:0016491; F:oxidoreductase activity; IEA.
DR   GO; GO:0006118; P:electron transport; IEA.
DR   InterPro; IPR008333; FAD_binding_6.
DR   InterPro; IPR001709; FPN_cyt_redctse.
DR   InterPro; IPR001433; Oxred_FAD/NAD(P).
DR   InterPro; IPR001221; Phe_hydroxylase.
DR   Pfam; PF00970; FAD_binding_6; 1.
DR   Pfam; PF00175; NAD_binding_1; 1.
DR   PRINTS; PR00371; FPNCR.
DR   PRINTS; PR00410; PHEHYDRXLASE.
KW   Complete proteome.
SQ   SEQUENCE   258 AA;  29377 MW;  2EB12D1A2CF92E5F CRC64;

  Query Match             50.8%;  Score 67;  DB 2;  Length 258;
  Best Local Similarity   82.4%;  Pred. No. 0.13;
  Matches   14;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          3 DGTFTSELSRLREGARL 19
              || |||||||||| :|
Db         78 DGEFTSELSRLREGDQL 94


RESULT 13
Q87WB1
ID   Q87WB1      PRELIMINARY;      PRT;   258 AA.
AC   Q87WB1;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   Ferredoxin--NADP reductase.
GN   Name=fnr-2; OrderedLocusNames=PSPTO4642;
OS   Pseudomonas syringae (pv. tomato).
OC   Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
OC   Pseudomonadaceae; Pseudomonas.
OX   NCBI_TaxID=323;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=DC3000;
RX   MEDLINE=22834015; PubMed=12928499; DOI=10.1073/pnas.1731982100;
RA   Buell C.R., Joardar V., Lindeberg M., Selengut J., Paulsen I.T.,
RA   Gwinn M.L., Dodson R.J., DeBoy R.T., Durkin A.S., Kolonay J.F.,
RA   Madupu R., Daugherty S.C., Brinkac L.M., Beanan M.J., Haft D.H.,
RA   Nelson W.C., Davidsen T.M., Zafar N., Zhou L., Liu J., Yuan Q.,
RA   Khouri H.M., Fedorova N.B., Tran B., Russell D., Berry K.J.,
RA   Utterback T.R., Van Aken S.E., Feldblyum T.V., D'Ascenzo M.,
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RA   Deng W.-L., Ramos A.R., Alfano J.R., Cartinhour S., Chatterjee A.K.,
RA   Delaney T.P., Lazarowitz S.G., Martin G.B., Schneider D.J., Tang X.,
RA   Bender C.L., White O., Fraser C.M., Collmer A.;
RT   "The complete genome sequence of the Arabidopsis and tomato pathogen
RT   Pseudomonas syringae pv. tomato DC3000.";
RL   Proc. Natl. Acad. Sci. U.S.A. 100:10181-10186(2003).
DR   EMBL; AE016872; AAO58088.1; -.
DR   HSSP; P28861; 1FDR.
DR   TIGR; PSPTO4642; -.
DR   GO; GO:0016491; F:oxidoreductase activity; IEA.
DR   GO; GO:0006118; P:electron transport; IEA.
DR   InterPro; IPR008333; FAD_binding_6.
DR   InterPro; IPR001709; FPN_cyt_redctse.
DR   InterPro; IPR001433; Oxred_FAD/NAD(P).
DR   InterPro; IPR001221; Phe_hydroxylase.
DR   Pfam; PF00970; FAD_binding_6; 1.
DR   Pfam; PF00175; NAD_binding_1; 1.
DR   PRINTS; PR00371; FPNCR.
DR   PRINTS; PR00410; PHEHYDRXLASE.
KW   Complete proteome.
SQ   SEQUENCE   258 AA;  29563 MW;  CF0268EC98B830F8 CRC64;

  Query Match             49.2%;  Score 65;  DB 2;  Length 258;
  Best Local Similarity   82.4%;  Pred. No. 0.26;
  Matches   14;  Conservative    0;  Mismatches    3;  Indels    0;  Gaps    0;

Qy          3 DGTFTSELSRLREGARL 19
              || |||||||||||  |
Db         78 DGEFTSELSRLREGDSL 94


RESULT 14
EXE1_HELSU
ID   EXE1_HELSU     STANDARD;      PRT;    38 AA.
AC   P04203;
DT   20-MAR-1987 (Rel. 04, Created)
DT   20-MAR-1987 (Rel. 04, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Exendin-1 (Helospectins I and II).
OS   Heloderma suspectum (Gila monster).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Lepidosauria; Squamata; Scleroglossa; Anguimorpha; Helodermatidae;
OC   Heloderma.
OX   NCBI_TaxID=8554;
RN   [1]
RP   SEQUENCE.
RC   TISSUE=Venom;
RX   MEDLINE=85006896; PubMed=6207171;
RA   Parker D.S., Raufman J.-P., O'Donohue T.L., Bledsoe M., Yoshida H.,
RA   Pisano J.J.;
RT   "Amino acid sequences of helospectins, new members of the glucagon
RT   superfamily, found in Gila monster venom.";
RL   J. Biol. Chem. 259:11751-11755(1984).
CC   -!- FUNCTION: Has a VIP/secretin-like biological activity.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Expressed by the venom gland.
CC   -!- SIMILARITY: Belongs to the glucagon family.
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DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 1.
DR   SMART; SM00070; GLUCA; 1.
DR   PROSITE; PS00260; GLUCAGON; 1.
KW   Direct protein sequencing; Glucagon family; Toxin.
FT   VARIANT      38     38       Missing (in helospectin II).
SQ   SEQUENCE   38 AA;  4096 MW;  54275BCFC368314A CRC64;

  Query Match             46.2%;  Score 61;  DB 1;  Length 38;
  Best Local Similarity   44.4%;  Pred. No. 0.13;
  Matches   12;  Conservative    6;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              ||| |||:| |:|     ||: |: ::
Db          1 HSDATFTAEYSKLLAKLALQKYLESIL 27


RESULT 15
GLUC_CAVPO
ID   GLUC_CAVPO     STANDARD;      PRT;   180 AA.
AC   P05110;
DT   13-AUG-1987 (Rel. 05, Created)
DT   13-AUG-1987 (Rel. 05, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Glucagon precursor [Contains: Glicentin; Glicentin-related polypeptide
DE   (GRPP); Oxyntomodulin (OXY) (OXM); Glucagon; Glucagon-like peptide 1
DE   (GLP-1); Glucagon-like peptide 1(7-37) (GLP-1(7-37)); Glucagon-like
DE   peptide 1(7-36) (GLP-1(7-36)); Glucagon-like peptide 2 (GLP-2)].
GN   Name=GCG;
OS   Cavia porcellus (Guinea pig).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OX   NCBI_TaxID=10141;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=86248118; PubMed=3755107; DOI=10.1016/0014-5793(86)81429-6;
RA   Seino S., Welsh M., Bell G.I., Chan S.J., Steiner D.F.;
RT   "Mutations in the guinea pig preproglucagon gene are restricted to a
RT   specific portion of the prohormone sequence.";
RL   FEBS Lett. 203:25-30(1986).
RN   [2]
RP   SEQUENCE OF 53-81.
RX   MEDLINE=86165412; PubMed=3956884;
RA   Huang C.G., Eng J., Pan Y.-C.E., Hulmes J.D., Yalow R.S.;
RT   "Guinea pig glucagon differs from other mammalian glucagons.";
RL   Diabetes 35:508-512(1986).
RN   [3]
RP   PARTIAL SEQUENCE OF 53-89.
RX   MEDLINE=86017849; PubMed=4048553; DOI=10.1016/0167-0115(85)90203-4;
RA   Conlon J.M., Hansen H.F., Schwartz T.W.;
RT   "Primary structure of glucagon and a partial sequence of oxyntomodulin
RT   (glucagon-37) from the guinea pig.";
RL   Regul. Pept. 11:309-320(1985).
RN   [4]
RP   REVIEW.
RX   PubMed=12554744; DOI=10.1210/me.2002-0306;
RA   Drucker D.J.;
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RT "Glucagon-like peptides: regulators of cell proliferation,
RT differentiation, and apoptosis.";
RL Mol. Endocrinol. 17:161-171(2003).
RN [5]
RP REVIEW.
RX PubMed=12626323; DOI=10.1152/ajpendo.00492.2002;
RA Jiang G., Zhang B.B.;
RT "Glucagon and regulation of glucose metabolism.";
RL Am. J. Physiol. 284:E671-E678(2003).
RN [6]
RP REVIEW.
RX PubMed=10322410;
RA Drucker D.J.;
RT "Glucagon-like peptide 2.";
RL Trends Endocrinol. Metab. 10:153-156(1999).
RN [7]
RP REVIEW.
RX PubMed=10605628; DOI=10.1210/er.20.6.876;
RA Kieffer T.J., Habener J.F.;
RT "The glucagon-like peptides.";
RL Endocr. Rev. 20:876-913(1999).
CC -!- FUNCTION: Glucagon plays a key role in glucose metabolism and
CC homeostasis. Regulates blood glucose by increasing gluconeogenesis
CC and decreasing glycolysis. A counterregulatory hormone of insulin,
CC raises plasma glucose levels in response to insulin-induced
CC hypoglycemia (By similarity).
CC -!- FUNCTION: GLP-1 is a potent stimulator of glucose-dependent
CC insulin release. Play important roles on gastric motility and the
CC suppression of plasma glucagon levels. May be involved in the
CC suppression of satiety and stimulation of glucose disposal in
CC peripheral tissues, independent of the actions of insulin. Have
CC growth-promoting activities on intestinal epithelium. May also
CC regulate the hypothalamic pituitary axis (HPA) via effects on LH,
CC TSH, CRH, oxytocin, and vasopressin secretion. Increases islet
CC mass through stimulation of islet neogenesis and pancreatic beta
CC cell proliferaton (By similarity).
CC -!- FUNCTION: GLP-2 stimulates intestinal growth and up-regulates
CC villus height in the small intestine, concomitant with increased
CC crypt cell proliferation and decreased enterocyte apoptosis. The
CC gastrointestinal tract, from the stomach to the colon is the
CC principal target for GLP-2 action. Plays a key role in nutrient
CC homeostasis, enhancing nutrient assimilation through enhanced
CC gastrointestinal function, as well as increasing nutrient
CC disposal. Stimulates intestinal glucose transport and decreases
CC mucosal permeability (By similarity).
CC -!- FUNCTION: Oxyntomodulin significantly reduces food intake (By
CC similarity).
CC -!- FUNCTION: Glicentin may modulate gastric acid secretion and
CC gastro-pyloro-duodenal activity (By similarity).
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- INDUCTION: Glucagon release is stimulated by hypoglycemia and
CC inhibited by hyperglycemia, insulin, and somatostatin. GLP-1 and
CC GLP-2 are induced in response to nutrient ingestion (By
CC similarity).
CC -!- PTM: Proglucagon is posttranslationally processed in a tissue-
CC specific manner in pancreatic A cells and intestinal L cells. In
CC pancreatic A cells, the major bioactive hormone is glucagon

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CC       cleaved by PCSK2/PC2. In the intestinal L cells PCSK1/PC1
CC       liberates GLP-1, GLP-2, glicentin and oxyntomodulin. GLP-1 is
CC       further N-terminally truncated by posttranslational processing in
CC       the intestinal L cells resulting in GLP-1(7-37) GLP-1-(7-36)amide.
CC       The C-terminal amidation is neither important for the metabolism
CC       of GLP-1 nor for its effects on the endocrine pancreas (By
CC       similarity).
CC   -!- SIMILARITY: Belongs to the glucagon family.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
CC   use by non-profit institutions as long as its content is in no way
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; D00014; BAA00010.1; -.
DR   PIR; A24856; GCGP.
DR   HSSP; P01275; 1D0R.
DR   InterPro; IPR000532; Glucagon.
DR   Pfam; PF00123; Hormone_2; 3.
DR   PRINTS; PR00275; GLUCAGON.
DR   PROSITE; PS00260; GLUCAGON; 4.
KW   Amidation; Cleavage on pair of basic residues;
KW   Direct protein sequencing; Glucagon family; Hormone; Signal.
FT   SIGNAL        1     20
FT   PEPTIDE      21     89       Glicentin (By similarity).
FT   PEPTIDE      21     50       Glicentin-related polypeptide (By
FT                                similarity).
FT   PEPTIDE      53     89       Oxyntomodulin.
FT   PEPTIDE      53     81       Glucagon.
FT   PROPEP       84     89       By similarity.
FT   PEPTIDE      92    128       Glucagon-like peptide 1 (By similarity).
FT   PEPTIDE      98    128       Glucagon-like peptide 1(7-37) (By
FT                                similarity).
FT   PEPTIDE      98    127       Glucagon-like peptide 1(7-36) (By
FT                                similarity).
FT   PROPEP      131    145       By similarity.
FT   PEPTIDE     146    178       Glucagon-like peptide 2 (By similarity).
FT   SITE         52     53       Cleavage (by PCSK2) (By similarity).
FT   SITE         83     84       Cleavage (by PCSK1 and PCSK2) (By
FT                                similarity).
FT   SITE         91     92       Cleavage (by PCSK1) (By similarity).
FT   SITE         97     98       Cleavage (by PCSK1) (By similarity).
FT   SITE        130    131       Cleavage (by PCSK1) (By similarity).
FT   SITE        145    146       Cleavage (by PCSK1) (By similarity).
FT   MOD_RES     127    127       Arginine amide (G-128 provides amide
FT                                group) (By similarity).
SQ   SEQUENCE   180 AA;  20972 MW;  702FB181161D2776 CRC64;

  Query Match             46.2%;  Score 61;  DB 1;  Length 180;
  Best Local Similarity   44.4%;  Pred. No. 0.7;
  Matches   12;  Conservative    6;  Mismatches    9;  Indels    0;  Gaps    0;

Qy          1 HSDGTFTSELSRLREGARLQRLLQGLV 27
              || |||||: |:  :  | |: |: |:
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Db 53 HSQGTFTSDYSKYLDSRRAQQFLKWLL 79

Search completed: March 16, 2005, 12:45:51
Job time : 94 secs